

Energy Auditing Company in Indonesia



A bussiness plan

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Introduction





Energy moves the world!

From Einstein's theorem up to current research on Higgs Boson, agrees that matter is another form of energy



Handling energy can be quite a cumbersome task, starting from conversion, distribution, up until useful usage which continued to be a one of the most challenging task for modern human.

More and more entities, private or public, in needs of a an effective and efficient energy processing

The Business

- Our business will mainly focus on energy saving and situated in Indonesia.
- Indonesia has not really taking it seriously about the energy crisis
- Indonesia starts to focus more on energy efficiency
- Indonesia is a potential market for energy auditing
- Low amount of degree of efficiency are a good reason why energy auditing is a potential business in Indonesia

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saben



Unsere Beliebte Heimatsland

We love Indonesia, our home paradise. If there is anything we can do, we would love to do it in Indonesia. Fortunately we see an opportunity to set up a business on energy audit here. That is why we set up our business in Indonesia.



A Little Fact About Indonesia



- Consists of 17,508 islands
- Around 300 distinct native ethnic groups
- Over than 742 different languages and dialects

A Little Fact About Indonesia



- The largest economy in Southeast Asia
- Main export markets are Japan, Singapore, USA, and China
- The hardest hit country by the Asian financial crisis of 1997–98
- Unemployment rate is 6.1%

A Little Fact About Indonesia

**ORANG BIJAK
TAAT PAJAK**



**ORANG PAJAK
TIDAK BIJAK**

- Employee's Tax ranged from 5 to 30%
- Companies Tax (Revenue) is fixed at 25%
- What so called "VAT" subjected to 10%

Mission and Vision

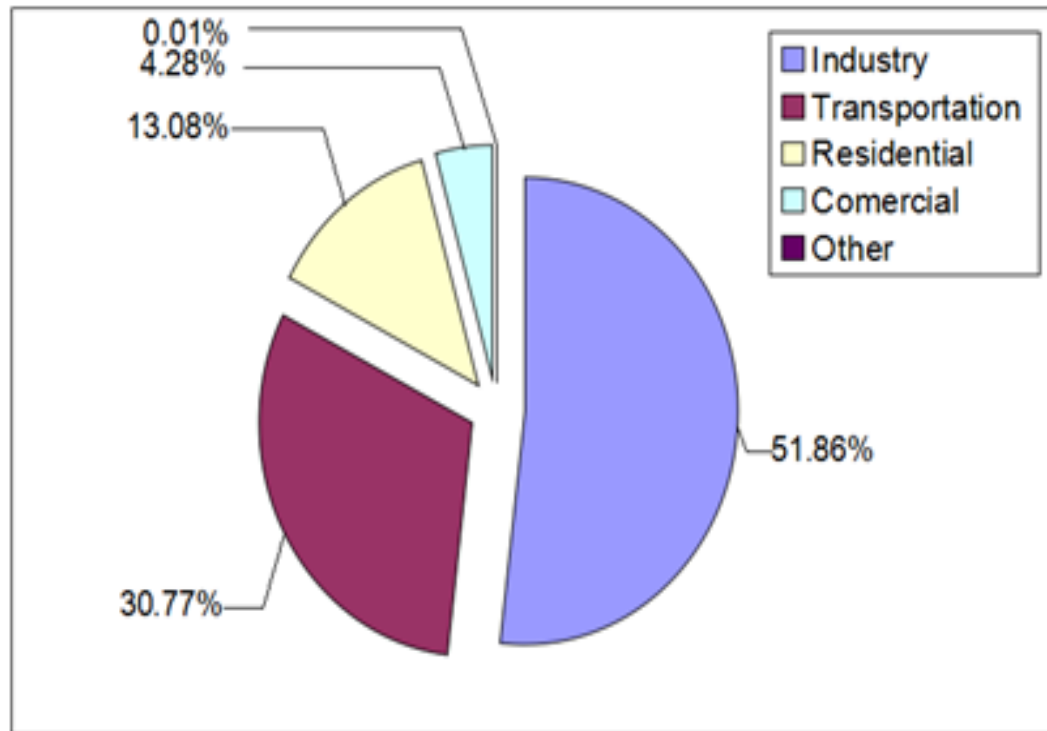
- Our mission is to give a high quality audit for our consumers.
- Our vision is to be one of the most referenced energy auditing company in Indonesia due to our high quality audit.



The Chance (Market Analysis)



Indonesia's energy users



Distribution of energy usage from the energy consumers in Indonesia (Source: Data Kementerian Energi dan Sumber Daya Mineral, 2010).

We recommend to read PEER Review on Energy Efficiency in Indonesia for detailed explanation on energy efficiency in Indonesia

Energy saving potential

Sector	Energy Saving Potential	Energy Saving Target in 2025
Industry	10% - 30 %	17 %
Commercial	10% -30%	15%
Transport	15% -35 %	20%
Residential	15% - 30%	15%
Others	15% - 30 %	0%

Energy saving target in 2025: the economic sectors. Source: Draft RIKEN – Directorate of Energy Conservation

Based on PEER government actions has taken several actions as a measure to enable energy efficiency, including creating institutional framework, policies, and programs. These policies indicates the opportunities for energy audit business.

Supporting Policies

- Government Regulation no.70/2009
- Presidential Instruction No.13/2011
- Ministerial Regulation No. 14/2012



Supporting policies

- Governmental institutions, state-owned companies and private companies which consumes more than 6000 toe per year have to implement Energy Management.
- The regulation set Energy Management up with 4 (four) main rules:
 1. Point out an Energy Manager
 2. Do the Energy Audit
 3. Implement the Result of Energy Audit
 4. Report the Implementation of Energy Audit

Potential consumers

- State-Owned Companies 120 companies¹
- Regionally Owned Companies : 1000 companies¹
- Private Companies (with energy usage more than 6000 TOE): 650 companies²
- Large and Medium Scale-Private Companies (with energy usage less than 6000 TOE): 166,400 Companies²
- Hotel Buildings (3 Stars Hotel and above): 1623 buildings³
- Private Participants (tools training e.g. Android Simulating Firmware): 210 (Electronic High Schools) with number of students estimated at 86,000 people⁴

[1]<http://www.lokernesiaku.com/2012/03/per-maret-2012-jumlah-bumd-diperkirakan.html>

[2]<http://ekonomi.inilah.com/read/detail/1204952/sektor-industri-konsumsi-494-energi-nasional#.UpkGMifAaYQ>

[3]http://www.bps.go.id/tab_sub/view.php?kat=2&tabel=1&daftar=1&id_subyek=16¬ab=1

[4]<http://datapokok.ditpsmk.net/>

Competitors

Asia Paragon Energy, PT	Rasuna Episentrum, Office Park KR-3 Jl. Rasuna Said, Jakarta 12960 Jakarta T: +62-21-83706678 F: +62-21-939 3844	
Enercon Equipment Company, PT	Aldevco Octagon II - Lt.4 Jl. Warung Jati Barat Raya No. 75 Jakarta 12740 T: +62-21-7941182 F: +62-21-7941184	
Energy Management Indonesia (Persero), PT	Jl. Wolter Monginsidi No. 6 Kebayoran Baru Jakarta 12160 T: +62-21-7268881 / 7268882 F: +62-21-7268880	
Indra Karya (Persero), PT	Jl. Biru Laut X Kav.9 Cawang Jakarta Timur 13340 T: +62-21-8192636 (Hunting) F: +62-21-8192179	
Inresh Indonesia, PT	Menara Bidskara Lt. 2 Suite 206 Jl. Jend. Gatot Subroto Kav.71-73 Jakarta Selatan 12870 T: +62-21-8296584	
Kaltimex Energy, PT	Menara Karya Lantai 19 Unit G-H Jl. Rasuna Said Blok X-5 Jakarta T: +62-21 57944600 F: +62-21 57944609	
Metropolitan Bayutama, PT	Jl. Jembatan tiga No. 36 FS -FT Jakarta Utara 14450 T: +62-21-6611034 - 36 / 6618551 F: +62-21-6611037 / 6618550	
Miura Indonesia, PT	Setia Building 2, Lt 1 Suite 102A Jl. HR Rasuna Said Kav 62 Kuningan Jakarta Selatan 12920 T: +62-21-5212223 F: +62-21-52906984	
Pura Mayungan, PT	Jl. Hayam Wuruk No. 4 F - H Jakarta T: +62-21-3866228 F: +62-21-3456879	
RBB Alpha Energy, PT	NK Building Lt. 4 Jln. MT.Haryono Kav.22, Cawang Jakarta Timur 13630 T: +62-21-8097921 F: +62-21-8097922	
Schneider Indonesia, PT	Gedung Ventura 7th Floor Jl RA Kartini Kav 26 Cilandak Jakarta 12430 T: +62-21-7504406 F: +62-21-7504415/16	
Sucofindo (Persero), PT	Graha Sucofindo Lt. 13 Jl. Raya Pasar Minggu Kav.34, Pancoran Jakarta 12780 T: 62-21-7983666 (2332/2331) F: +62-21-7986786	
Trakond Industry, PT	Rekayasa Building II, 3rd Floor Jl. Kalibata Timur I No. 36 Jakarta 12740 T: +62-21-797 4367 F: +62-21-79180907,	

Asosiasi perusahaan penunjang konservasi energi Indonesia. (APKENINDO) Taken from:
<http://www.apkenindo.com/daftar-anggota.html>

The Business Scheme



- Our potential market is consisted of more than 170,000 companies and buildings. We also like to expand our market to students (gives training) and this means that we will have market of around 86,000 people
- Government has deploying funds for 2014 sum of money 30,500,000 euro to help companies do the energy efficiency

Short time business (0-5 years)

Long time business (5 years and above)

Energy Auditing :

- Low cost

This is including free implementation in energy efficiency such turning off the lamp when it is not used. The low cost implementation must be free or low cost and can be implemented immediately.

- Middle cost

The easy example of middle cost implementation is changing the old bulb lamp into new higher efficiency lamp. The cost is not really high and need time (most likely months to three years) to implement this subject.

- High cost

High cost implementation is the other things not subjected to both previous cost implementations. This must be expensive money (such as changing your old power plant to the new one) and need a lot of time to do this (could take more than 10 years). In government's policy, the high cost implementation is not really recommended for user, only if the companies found good investors which are willing to finance the programs.

- Training

In addition from energy auditing we will also held training related to energy efficiency method and technology by inviting student. Our main target is vocational high school .

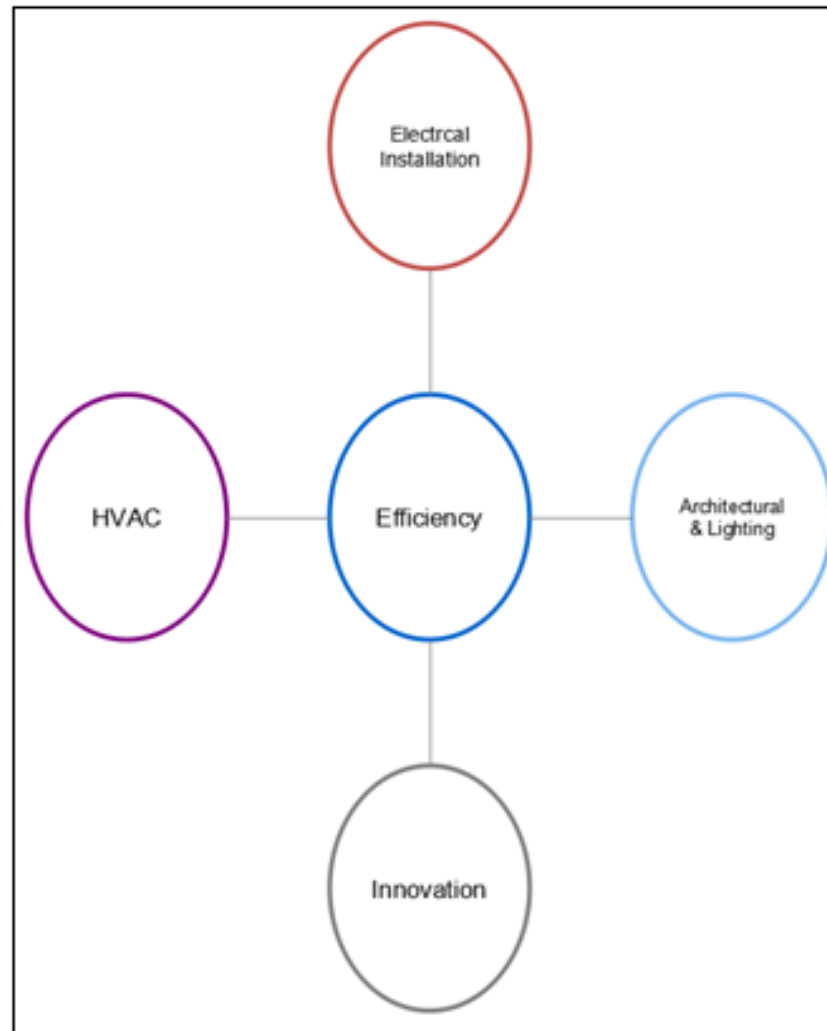


Audit based on standards

	Building standard	SNI
1.	Energy conservation for building envelope	SNI 03-6389-2000
2.	Energy conservation for air conditioning system in building	SNI 03-6390-2000
3.	Energy conservation for lighting system in building	SNI 03-6197-2000
4.	Energy audit procedure for building	SNI 03-6196-2000

Building standardization

Auditing scheme



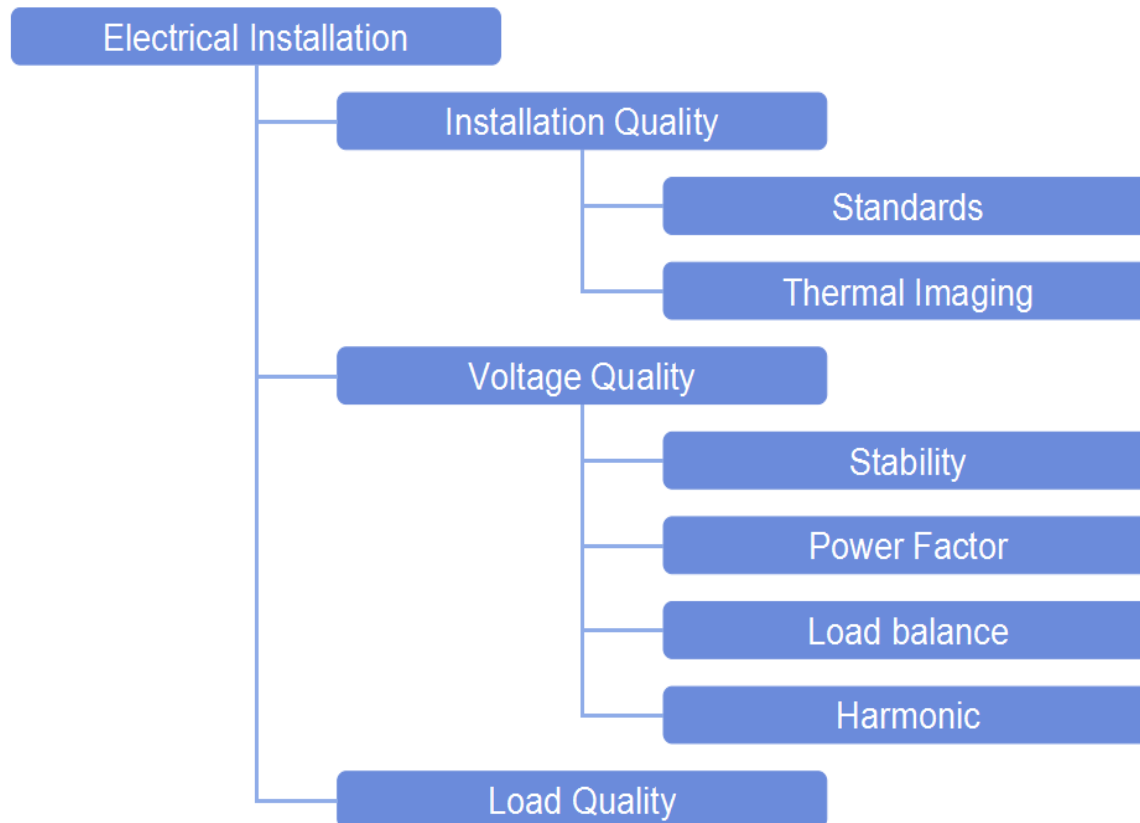
Work scheme

Auditing Scheme

- Data Collection
- Data Analyzing
- Final Report and Recommendation



Electrical installation audit



Electrical installation audit

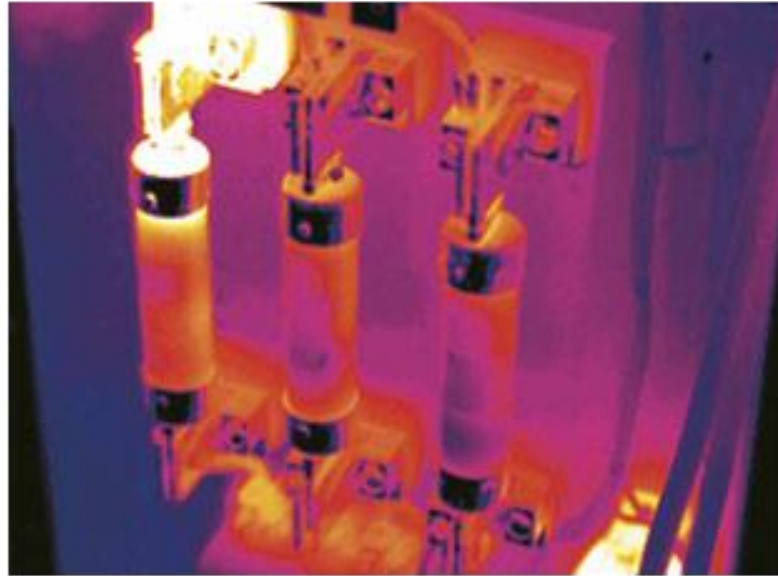
- **Electrical System Evaluation:** evaluate the power contract of electricity, the load curve (load factor and demand factor) and also the power quality (power factor).

Additionally, the balance of electrical and installed capacity of network systems will also be evaluated;

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Installation Quality audit



Hot regions showed in bright color. Improper installation creates hotspot which when ignored can lead to energy wasting and fire hazard.

Load quality audit

	Product	SNI EPTS
1.	Ballast (magnetic)	SNI IEC 60929-2009
2.	Fluorescent lamp	SNI IEC 60901-2009
3.	Incandescent lamp	SNI IEC 60432-1-2009
4.	Room air conditioner – split type	ISO 5151
5.	Room air conditioner – window type	ISO 5151
6.	Household refrigerator	SNI IEC 15502-2009
7.	Clothes dryer	SNI IEC 60456-2009
8.	Electric iron	SNI IEC 60311-2000
9.	Vacuum cleaner	SNI IEC 60312-2009

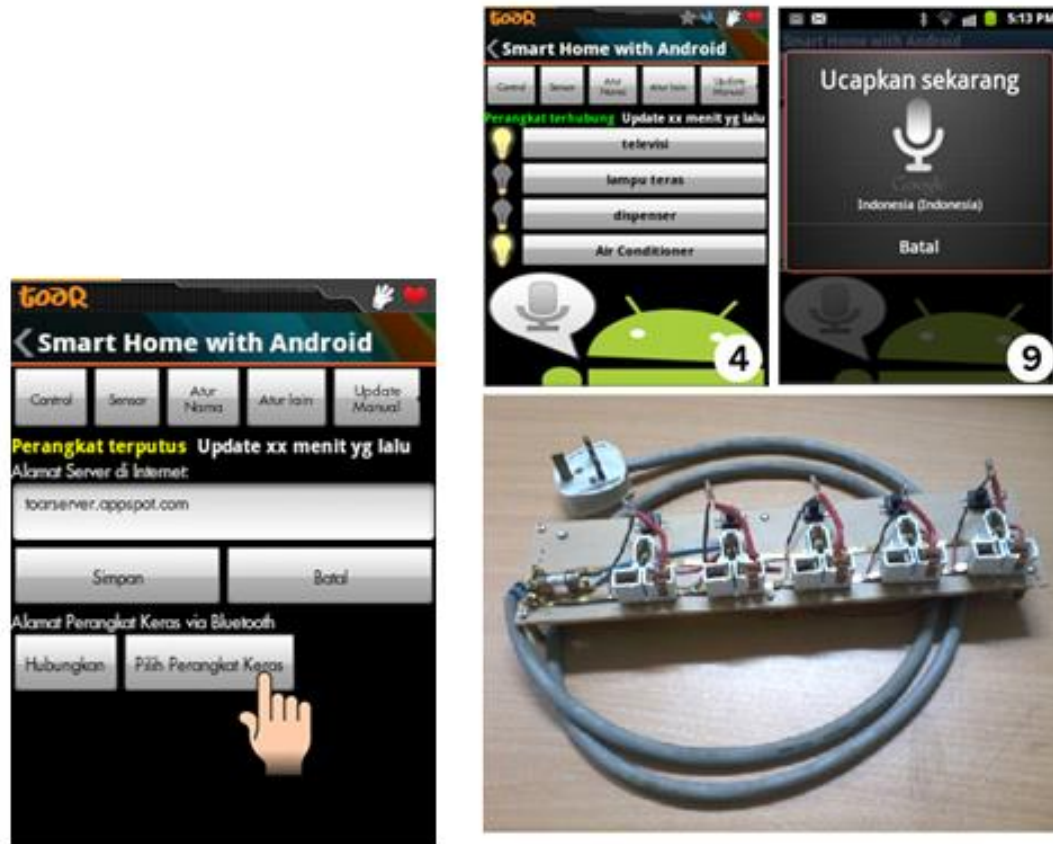
List of products and its standardization. Standardized product is guaranteed to be energy efficient.

Architectural/Lighting audit

DIALux evo 3
made by DIAL.



Screenshot from Dialux Evo 3 program



Screenshot of the application



Office Location

Auditing business is a type of business where a lot of freedom can be done. As for an example we do not need a lot of equipment and any machine to deliver our service. That is why it would be more beneficial if we do the job at home. Nevertheless, we will rent a virtual office as our official address to increase connectivity and prestige within our consumers. Located in the heart of the business in Indonesia.



Office Location



We do believe that branding is everything. A good image must be created by gut, hard work and perfection in our company. Therefore we choose name “Energi Saben”. Energi is energy, derived from Indonesian language, means that this company will always be related to energy field. While Saben is Javanese language for “always”. Therefore, our company, PT. Energi Saben expects to have a continuous improvement in energy sector. We are assured that this company will grow to top leading energy business consultant in Indonesia with non-stop improvement and innovation.





- The color shows the sustainable life
- The style is futuristic, means that there is an element for technology
- The style is adopted from fire, means passion, spirit and energy

Promotion Strategy

- Online advertising

Why?

How?



- ✓ Cheap
- ✓ Easy
- ✓ SEO Optimization
- ✓ LinkedIn
- ✓ Indonetnetwork
- ✓ Facebook
- ✓ Twitter
- ✓ Energy Campaign Propaganda
- ✓ Email Advertising (Training Purpose)

Promotion Strategy

- SEO Optimization → www.google.co.id
- LinkedIn profile → cost-free
- indonetwork.co.id → 151,000 Indonesian companies registered
- Facebook → 24 million users, targeted market 25-50 years old (30%)
- Twitter → 19.5 million tweeps, targeted market young age, tweet, trendingtopic, quizzes

Promotion Strategy

- Our twitter energy campaign most likely discuss about energy saving importance, energy saving know-how, with hidden message, introduce our company to Indonesian community. We also create mask link that will make people interested to go to our page and then starting read about our company and the history.

Promotion Strategy-Video Campaign



PORTABLE SMART HOUSE

MONITORING & CONTROLLING BERBASIS KOMUNIKASI TEXT (SMS) DENGAN HARGA YANG TERJANGKAU.

EFISIENSI WAKTU DALAM KEGIATAN MONITORING & CONTROLLING

MENINGKATKAN KENYAMANAN & KEAMANAN

SISTEM KEAMANAN TAHAP GANDA (SECONDARY LAYER)

MENGHEMAT ENERGI



PRODUCT DESCRIPTION

MONITORING

CONTROL

INNOVATION

PORTABLE

EASY USE

NON-PROTOTYPE



SAVE ENERGY

ENVIRONMENTALLY FRIENDLY

CONTACT :



GALAXY_JOSEPHFLY@YAHOO.COM

Application



JOSEPH LIEM



GOVERNMENT

SCHOOL

COMPANY

HOSPITAL

BANK

THE IDIOT STYLE



Smart Tech Corporation
we make life easier

Promotion Strategy

- Offline advertising
 - Newspaper advertisement
 - Government Cooperation
 - Brochures
 - Door to door

Brochure Example

- **Government Cooperation**
 - To make Indonesian government trust us and make our company as one of the best partner in energy efficiency collaboration
 - To create good collaboration with EECHI to reach our goals

- Newspaper Advertisement

- *KOMPAS*
AMANAT HATI SUBANI RAKYAT

- Jawa Pos 
JAWA POS NATIONAL NETWORK

- Two biggest players of newspaper in Indonesia
 - Potential readers circulating around 1.7 million for Kompas and 1.3 million for Jawa Pos
 - 54 percent of the readers are potentially middle to high segmented people, 61 percent of them are highly educated and from that number, 64 percent of them are in the range of productive ages (20 to 40 years old)

Company Form and Organizational Structure



Type of Limited Liability Company in Indonesia

- Enclosed PT

Enclosed PT is a limited liability company whose shares can only be owned by certain people who have been determined but everyone can participate in the circulation of capital. The difference is, shares held "on behalf of" so it can not be sold on the open stock market.





- Opened PT
Opened PT is kind of limited liability company where the shares can be bought and owned by everyone without exception so it's very easy to be sold to the community.
- PMDN (Domestic Investment)
- PMA (Foreign Investment)
- Persero (Public Company) owned by government
- Perjan (Public Corporate Company) with no desire of gaining profit
- Perum (Public Company) owned by Indonesian society

Our type of business

- Energi Saben will be established as a limited liability company. We choose this type based on some of factors:
 - Shareholders have limited liability of the corporate debt. The point is that if the company has a debt, you are only responsible for your deposited capital.
 - Easy to obtain additional capital to expand its business after several years, for example, by loan from the bank.
 - Makes company more trusted by partners and customers.

Requirement of forming a limited liability company (PT) in Indonesia

- ⑩ Company name
- ⑩ Field of Business
- ⑩ Names of Owner Capital (Minimum Two Persons)
- ⑩ Business Classification: Small (3060 € - 30,000 €), Medium (30,060 € -600,000 €), Large (Over 600,000 €)
- ⑩ Percentage of Ownership Capital/Shareholders
- ⑩ Name of the Director (Supreme Leader of the Company)
- ⑩ Copy ID of the Owner Capital/Shareholders
- ⑩ Tax ID of the Director
- ⑩ Photo of the Director size 3x4 cm 2 pieces
- ⑩ Domicile Certificate of Business
- ⑩ Copy of the Proof of Ownership Business Premises and Land Tax or Renting Business Premises
- ⑩ Telephone Number of the Company
- ⑩ Sitemap of the Business Place (If the Company becomes Taxable Company).



Organization Structure

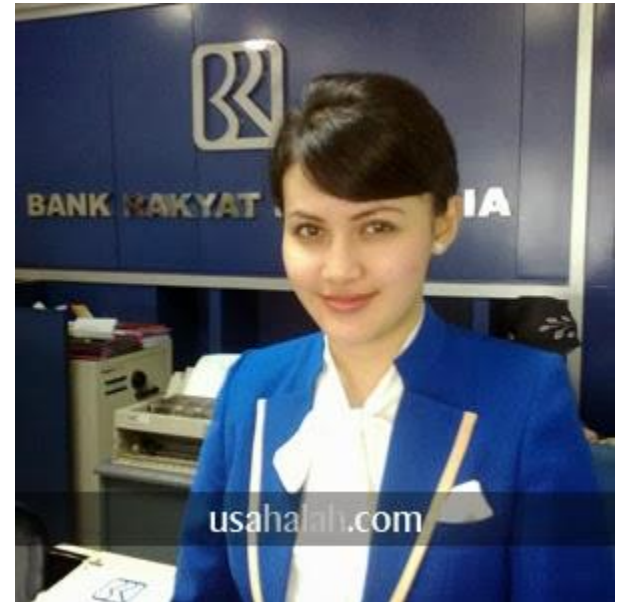
- **Operational Manager**
 - The operational manager functions as the manager of the workers.
- **Marketing and Financing Manager**
 - The marketing and financing manager tackles the non technical aspect of the business.
- **The Workers**
 - The workers responsibilities may vary from measurements, assessments, and trainings. The workers are employed on a short time basis and recruited by the operational manager. The workers should have at least a high school grade to be recruited. The amount of wage the workers get will be based on the number of projects being done.

The Outcome and The Income



Financing Strategy

- Lending money from the Indonesian banks is not suitable for our business. We will not lend to bank because of the fact that we only need small investment and the package offered by the bank will have an interest rate of 22% and business experience for more than 2 years. This regulation makes us unable to lend money because we are just starting the business. We will invest by just depending to investors instead.



Cost Components

- In our business to maximize flexibility we would like to mostly take on variable cost. We do not invest in land or office acquisition as explained before but we rent a virtual office instead. We only invest in licenses, permits, certifications, website, standard working appliances and of course some circulating capital to make our business sets on motion.



Cost Components



- Variable cost components shall come from labor cost, equipment rental cost, and accommodations. Labor cost included inside the variable cost because we only provide short-term contracts when there are work available

Cost Calculations

We separate the table based on year. Because we have three different kinds of project we use division with equivalents technique to count specific project cost. Small project has a weight of one while medium and large project have a weight of two and four respectively.

- Small project : Office building with maximum 8 floor
- Medium Project : Office building with more than 20 floors or factory building with energy usage less than 6000 TOE/a
- Large project: Office building with maximum 20 floor or factory building with energy usage more than 6000 TOE/a

Cost Calculations

Investment Cost

Description	Amount	Depreciation in % p.a.	Depreciation Costs
Auditor Energy License	1,020.00 €	0%	- €
Website Building	400.00 €	20%	80.00 €
Notebook&Printer	800.00 €	25%	200.00 €
Digital Camera	300.00 €	25%	75.00 €
Establishment Charge of Limited Liability Company	600.00 €	0%	- €
Unexpected	6,343.00 €		
Circulating Capital	16,000.00 €		
Total Investment	25,463.00 €	Total Depreciation Cost	355.00 €

Cost Calculations

Expected Number of sales

Expendable material Per Project	Year 1	Year 2	Year 3	Year 4	Year 5
Small Project	24	60	30	30	20
Medium Project	12	30	60	15	20
Large Project	6	15	15	60	65
Training	500	1000	1500	2000	2000

Cost Calculations

Audit project cost year 1

Expendable material Per Project	Multiplication Factor for small project	Multiplication Factor for medium project	Multiplication Factor for large project	specific consumption per small project*) (Euro)	specific consumption per medium project **) (Euro)	specific consumption per large project ***) (Euro)	specific price in Euro
Raw materials (in piece)							
Paper+printer tint	24	12	6	60.00 €	120.00 €	480.00 €	5,760.00 €
Utilities Cost							
Website Maintenance and SEO Optimization							100.00 €
Facebook and Twitter Advertisement							300.00 €
Other online Advertising							100.00 €
Newspaper advertising (BW Banner)							600.00 €
Brochures&Business Card							50.00 €
Electricity&Real Utility Expense							360.00 €
Virtual Office Rent&Telephone Secretary							288.00 €
Internet							158.00 €
Energy Equipment (Luxmeter, Power quality, Voltage regulator, etc) Rent	24	12	6	200.00 €	400.00 €	800.00 €	14,400.00 €
Transportation&Accommodation	24	12	6	100.00 €	200.00 €	400.00 €	7,200.00 €
Meeting room	24	12	6	100.00 €	200.00 €	400.00 €	7,200.00 €
Fotocopy and bindery	24	12	6	11.00 €	22.00 €	44.00 €	792.00 €
Labour Cost							
CEO	24	12	6	500.00 €	1,000.00 €	2,000.00 €	36,000.00 €
Manager	24	12	6	500.00 €	1,000.00 €	2,000.00 €	36,000.00 €
Assistant (1 people)	24	12	6	250.00 €	500.00 €	1,000.00 €	18,000.00 €
Technician (2 people)	24	12	6	250.00 €	500.00 €	1,000.00 €	18,000.00 €
Helper (Part time/ Student 8 people)	24	12	6	250.00 €	500.00 €	1,000.00 €	18,000.00 €
Depreciation cost							355.00 €
SUM of variable costs							163,663.00 €

Cost Calculations

Unit costs for audit project year 1

Division with equivalents				
Total Cost:	163,663.00 €			
Equivalent	Project Signed	Units of account	Unit Costs	Total Costs per sort
		1*2		
Small project (1)	24	24	2,273 €	54,554 €
Medium Project (2)	12	24	4,546 €	54,554 €
Large Project (4)	6	24	9,092 €	54,554 €
Total		72		163,663 €
Total Cost/Total Project Signed	2,273.10 €			

Training costs year 1

Expendable material Per Project	Multiplication Factor	specific consumption per person	specific price in Euro
Raw materials (in piece)			
Paper+printer tint	500	1.50 €	750.00 €
Utilities Cost			- €
Toolkit for training (android and arduino kit)	25	400.00 €	400.00 €
Transportation&Accomodation	25	200.00 €	5,000.00 €
Fotocopy and bindery	500	1.50 €	750.00 €
Labour Cost			- €
Instructor (1 people)	25	500.00 €	12,500.00 €
Helper (Part time/Student 1 people)	25	100.00 €	2,500.00 €
SUM of variable costs			21,900.00 €
Costs per person			43.80 €

Cost Calculations

Audit project cost year 2

Expendable material Per Project	Multiplication Factor for small project	Multiplication Factor for medium project	Multiplication Factor for large project	specific consumption per small project*)	specific consumption per medium project **)	specific consumption per large project ***)	specific price in Euro
Raw materials (in piece)							
Paper+printer tint	60	30	15	60.00 €	120.00 €	480.00 €	14,400.00 €
Utilities Cost							
Website Maintenance and SEO Optimization							100.00 €
Facebook and Twitter Advertisement							300.00 €
Other online Advertising							100.00 €
Newspaper advertising (BW Banner)							600.00 €
Brochures&Business Card							50.00 €
Electricity&Real Utility Expense							360.00 €
Virtual Office Rent&Telephone Secretary							288.00 €
Internet							158.00 €
Energy Equipment (Luxmeter, Power quality, Voltage regulator, etc) Rent	60	30	15	200.00 €	400.00 €	800.00 €	36,000.00 €
Transportation&Accommodation	60	30	15	100.00 €	200.00 €	400.00 €	18,000.00 €
Meeting room	60	30	15	100.00 €	200.00 €	400.00 €	18,000.00 €
Fotocopy and bindery	60	30	15	11.00 €	22.00 €	44.00 €	1,980.00 €
Labour Cost							
CEO	60	30	15	400.00 €	800.00 €	1,600.00 €	72,000.00 €
Manager	60	30	15	400.00 €	800.00 €	1,600.00 €	72,000.00 €
Assistant (1 people)	60	30	15	200.00 €	400.00 €	800.00 €	36,000.00 €
Technician (4 people)	60	30	15	400.00 €	800.00 €	1,600.00 €	72,000.00 €
Helper (Part time/Student 16 people)	60	30	15	400.00 €	800.00 €	1,600.00 €	72,000.00 €
Depreciation cost							355.00 €
SUM of variable costs							414,691.00 €

Cost Calculations

Unit costs for adult project year 2

Division with equivalents				
Total Cost:	414,691.00 €			
Equivalent	Project Signed	Units of account	Unit Costs	Total Costs per sort
		1*2		
Small Project (1)	60	60	2,303.84€	138,230.33 €
Medium Project (2)	30	60	4,607.68€	138,230.33 €
Large Project (4)	15	60	9,215.36€	138,230.33 €
		180		414,691.00 €
Total Cost/Total Project Signed			2,303.84 €	

Training costs year 2

Expendable material Per Project	Multiplication Factor	specific consumption per person	specific price in Euro
Raw materials (in piece)			
Paper+printer tint	1000	1.50 €	1,500.00 €
Utilities Cost			- €
Toolkit for training (android and arduino kit)	50	400.00 €	400.00 €
Transportation&Accomodation	50	200.00 €	10,000.00 €
Fotocopy and bindery	1000	1.50 €	1,500.00 €
Labour Cost			- €
Instructor (1 people)	50	500.00 €	25,000.00 €
Helper (Part time/Student 1 people)	50	100.00 €	5,000.00 €
SUM of variable costs			43,400.00 €
Costs per person			43.40 €

Cost Calculations

Audit project cost year 3

Expendable material Per Project	Multiplication Factor for small project	Multiplication Factor for medium project	Multiplication Factor for large project	specific consumption per small project*)	specific consumption per medium project **)	specific consumption per large project ***)	specific price in Euro
Raw materials (in piece)							
Paper+printer tint	30	60	15	60.00 €	120.00 €	480.00 €	16,200.00 €
Utilities Cost							
Website Maintenance and SEO Optimization							100.00 €
Facebook and Twitter Advertisement							300.00 €
Other online Advertising							100.00 €
Newspaper advertising (BW Barner)							600.00 €
Brochures&Business Card							50.00 €
Electricity&Real Utility Expense							360.00 €
Virtual Office Rent&Telephone Secretary							288.00 €
Internet							158.00 €
Energy Equipment (Luxmeter, Power quality, Voltage regulator, etc) Rent	30	60	15	200.00 €	400.00 €	800.00 €	42,000.00 €
Transportation&Accomodation	30	60	15	100.00 €	200.00 €	400.00 €	21,000.00 €
Meeting room	30	60	15	100.00 €	200.00 €	400.00 €	21,000.00 €
Fotocopy and bindery	30	60	15	11.00 €	22.00 €	44.00 €	2,310.00 €
Labour Cost							
CEO	30	60	15	400.00 €	800.00 €	1,600.00 €	84,000.00 €
Manager	30	60	15	400.00 €	800.00 €	1,600.00 €	84,000.00 €
Assistart (1 people)	30	60	15	200.00 €	400.00 €	800.00 €	42,000.00 €
Technician (4 people)	30	60	15	400.00 €	800.00 €	1,600.00 €	84,000.00 €
Helper (Part time/Student 16 people)	30	60	15	400.00 €	800.00 €	1,600.00 €	84,000.00 €
Depreciation cost							355.00 €
SUM of variable costs							482,821.00 €

Cost Calculations

Unit costs for audit project year 3

Division with equivalents				
Total Cost:	482,821.00 €			
1	2	3	4	5
Equivalent	Project Signed	Units of account	Unit Costs	Total Costs per sort
		1*2		
Small Project (1)	30	30	2,299.15 €	68,974.43 €
Medium Project (2)	60	120	4,598.30 €	275,897.71 €
Large Project (4)	15	60	9,196.59 €	137,948.86 €
		210		482,821.00 €
Total Cost/Total Project Signed	2,299.15 €			

Training costs year 3

Expendable material Per Project	Multiplication Factor	specific consumption per person	specific price in Euro
Raw materials (in piece)			
Paper+printer tint	1500	1.50 €	2,250.00 €
Utilities Cost			- €
Toolkit for training (android and arduino kit)	75	400.00 €	400.00 €
Transportation&Accomodation	75	200.00 €	15,000.00 €
Fotocopy and bindery	1500	1.50 €	2,250.00 €
Labour Cost			- €
Instructor (1 people)	75	500.00 €	37,500.00 €
Helper (Part time/Student 1 people)	75	100.00 €	7,500.00 €
SUM of variable costs			64,900.00 €
Costs per person			43.27 €

Cost Calculations

Audit project cost year 4

Expendable material Per Project	Multiplication Factor for small project	Multiplication Factor for medium project	Multiplication Factor for large project	specific consumption per small project*)	specific consumption per medium project **)	specific consumption per large project ***)	specific price in Euro
Raw materials (in piece)							
Paper+printer tint	30	15	60	60.00 €	120.00 €	480.00 €	32,400.00 €
Utilities Cost							
Website Maintenance and SEO Optimization							100.00 €
Facebook and Twitter Advertisement							300.00 €
Other online Advertising							100.00 €
Newspaper advertising (BW Barner)							600.00 €
Brochures&Business Card							50.00 €
Electricity&Real Utility Expense							360.00 €
Virtual Office Rent&Telephone Secretary							288.00 €
Internet							158.00 €
Energy Equipment (Luxmeter, Power quality, Voltage regulator, etc) Rent	30	15	60	200.00 €	400.00 €	800.00 €	60,000.00 €
Transportation&Accomodation	30	15	60	100.00 €	200.00 €	400.00 €	30,000.00 €
Meeting room	30	15	60	100.00 €	200.00 €	400.00 €	30,000.00 €
Fotocopy and bindery	30	15	60	11.00 €	22.00 €	44.00 €	3,300.00 €
Labour Cost							
CEO	30	15	60	400.00 €	800.00 €	1,600.00 €	120,000.00 €
Manager	30	15	60	400.00 €	800.00 €	1,600.00 €	120,000.00 €
Assistant (1 people)	30	15	60	200.00 €	400.00 €	800.00 €	60,000.00 €
Technician (4 people)	30	15	60	400.00 €	800.00 €	1,600.00 €	120,000.00 €
Helper (Part time/Student 16 people)	30	15	60	400.00 €	800.00 €	1,600.00 €	120,000.00 €
Depreciation cost							355.00 €
SUM of variable costs							698,011.00 €

Cost Calculations

Unit costs for audit project year 4

Division with equivalents				
Total Cost:	698,011.00 €			
Equivalent	Project Signed	Units of account	Unit Costs	Total Costs per sort
		1*2		
Small project (1)	30	30	2,326.70 €	69,801.10 €
Medium Project (2)	15	30	4,653.41 €	69,801.10 €
Large Project (4)	60	240	9,306.81 €	558,408.80 €
		300		698,011.00 €
Total Cost/Total Project Signed	2,326.70 €			

Training costs year 4

Expendable material Per Project	Multiplication Factor	specific consumption per person	specific price in Euro
Raw materials (in piece)			
Paper+printer tint	2000	1.50 €	3,000.00 €
Utilities Cost			- €
Toolkit for training (android and arduino kit)	100	400.00 €	400.00 €
Transportation&Accommodation	100	200.00 €	20,000.00 €
Fotocopy and bindery	2000	1.50 €	3,000.00 €
Labour Cost			- €
Instructor (1 people)	100	500.00 €	50,000.00 €
Helper (Part time/Student 1 people)	100	100.00 €	10,000.00 €
SUM of variable costs per project			86,400.00 €
Costs per person			43.20€

Cost Calculations

Audit project cost year 5

Expendable material Per Project	Multiplication Factor for small project	Multiplication Factor for medium project	Multiplication Factor for large project	specific consumption per small project*)	specific consumption per medium project **)	specific consumption per large project ***)	specific price in Euro
Raw materials (in piece)							
Paper+printer tint	20	20	65	60.00 €	120.00 €	480.00 €	34,800.00 €
Utilities Cost							
Website Maintenance and SEO Optimization							100.00 €
Facebook and Twitter Advertisement							300.00 €
Other online Advertising							100.00 €
Newspaper advertising (BW Banner)							600.00 €
Brochures&Business Card							50.00 €
Electricity&Real Utility Expense							360.00 €
Virtual Office Rent&Telephone Secretary							288.00 €
Internet							158.00 €
Energy Equipment (Luxmeter, Power quality, Voltage regulator, etc) Rent	20	20	65	200.00 €	400.00 €	800.00 €	64,000.00 €
Transportation&Accomodation	20	20	65	100.00 €	200.00 €	400.00 €	32,000.00 €
Meeting room	20	20	65	100.00 €	200.00 €	400.00 €	32,000.00 €
Fotocopy and bindery	20	20	65	11.00 €	22.00 €	44.00 €	3,520.00 €
Labour Cost							
CEO	20	20	65	400.00 €	800.00 €	1,600.00 €	128,000.00 €
Manager	20	20	65	400.00 €	800.00 €	1,600.00 €	128,000.00 €
Assistant (1 people)	20	20	65	200.00 €	400.00 €	800.00 €	64,000.00 €
Technician (4 people)	20	20	65	400.00 €	800.00 €	1,600.00 €	128,000.00 €
Helper (Part time/Student 16 people)	20	20	65	400.00 €	800.00 €	1,600.00 €	128,000.00 €
Depreciation cost							80.00 €
SUM of variable costs							744,356.00 €

Cost Calculations

Unit costs for audit project year 5

Division with equivalents				
Total Cost:	744,356.00 €			
Equivalent	Project Signed	Units of account	Unit Costs	Total Costs per sort
		1*2		
Small project (1)	20	20	2,326.11 €	46,522.25 €
Medium Project (2)	20	40	4,652.23 €	93,044.50 €
Large Project (4)	65	260	9,304.45 €	604,789.25 €
		320		744,356.00 €
Total Cost/Total Project Signed	2,326.11 €			

Training costs year 5

Expendable material Per Project	Multiplication Factor	specific consumption per person	specific price in Euro
Raw materials (in piece)			
Paper+printer tint	2000	1.50 €	3,000.00 €
Utilities Cost			- €
Toolkit for training (android and arduino kit)	100	400.00 €	400.00 €
Transportation&Accomodation	100	200.00 €	20,000.00 €
Fotocopy and bindery	2000	1.50 €	3,000.00 €
Labour Cost			- €
Instructor (1 people)	100	500.00 €	50,000.00 €
Helper (Part time/Student 1 people)	100	100.00 €	10,000.00 €
SUM of variable costs per project			86,400.00 €
Costs per person			43.20 €

Cost Calculations

Revenue

Product	Self Cost Year 1	Chooosen Sales Price	Item Sales year 1	Revenue year 1	Self Cost Year 2	Chooosen Sales Price	Item Sales year 2	Revenue year 2
Energy Audit (Small Project)	2,273.10 €	4,000.00 €	24.00 €	96,000.00 €	2,303.84 €	4,000.00 €	60.00 €	240,000.00 €
Energy Audit (Medium Project)	4,546.19 €	8,000.00 €	12.00 €	96,000.00 €	4,607.68 €	8,000.00 €	30.00 €	240,000.00 €
Energy Audit (Large Project)	9,092.39 €	16,000.00 €	6.00 €	96,000.00 €	9,215.36 €	16,000.00 €	15.00 €	240,000.00 €
Training Energy Saving (Android)	43.80 €	60.00 €	500.00 €	30,000.00 €	43.40 €	60.00 €	1,000.00 €	60,000.00 €
Total revenue				318,000.00 €				780,000.00 €

Product	Self Cost Year 3	Chooosen Sales Price	Item Sales year 3	Revenue year 3	Self Cost Year 4	Chooosen Sales Price	Item Sales year 4	Revenue year 4
Energy Audit (Small Project)	2,299.15 €	4,000.00 €	30.00 €	120,000.00 €	2,326.70 €	4,000.00 €	30.00 €	120,000.00 €
Energy Audit (Medium Project)	4,598.30 €	8,000.00 €	60.00 €	480,000.00 €	4,653.41 €	8,000.00 €	15.00 €	120,000.00 €
Energy Audit (Large Project)	9,196.59 €	16,000.00 €	15.00 €	240,000.00 €	9,306.81 €	16,000.00 €	60.00 €	960,000.00 €
Training Energy Saving (Android)	43.27 €	60.00 €	1,500.00 €	90,000.00 €	43.20 €	60.00 €	2,000.00 €	120,000.00 €
Total Revenue				930,000.00 €				1,200,000.00 €

Cost Calculations

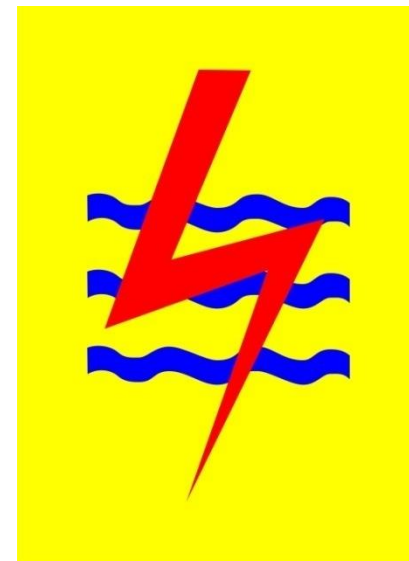
Product	Self Cost Year 5	Chooosen Sales Price	Item Sales year 5	Revenue year 5
Energy Audit (Small Project)	2,326.11 €	4,000.00 €	20.00 €	80,000.00 €
Energy Audit (Medium Project)	4,652.23 €	8,000.00 €	20.00 €	160,000.00 €
Energy Audit (Large Project)	9,304.45 €	16,000.00 €	65.00 €	1,040,000.00 €
Training Energy Saving (Android)	43.20 €	60.00 €	2,000.00 €	120,000.00 €
				1,400,000.00 €

Cash flow

Desc.	1st year	2nd year	3rd year	4th year	5th year
Turnover/Revenue	318,000.00 €	780,000.00 €	930,000.00 €	1,200,000.00 €	1,400,000.00 €
Depreciation Costs	355.00 €	355.00 €	355.00 €	355.00 €	80.00 €
Variable Costs (Project)	163,663.00 €	414,691.00 €	482,821.00 €	698,011.00 €	744,356.00 €
Variable Costs (Training)	21,900.00 €	43,400.00 €	64,900.00 €	86,400.00 €	86,400.00 €
Loss Carried Forward	- €	- €	- €	- €	- €
Profit Before Taxes	132,082.00 €	321,554.00 €	381,924.00 €	415,234.00 €	569,164.00 €
Taxes 25%	33,020.50 €	80,388.50 €	95,481.00 €	103,808.50 €	142,291.00 €
Profit After Taxes	99,061.50 €	241,165.50 €	286,443.00 €	311,425.50 €	426,873.00 €
Cash-flow	99,416.50 €	241,520.50 €	286,798.00 €	311,780.50 €	426,953.00 €
Repayment Credit	- €	- €	- €	- €	- €
Dividend	99,416.50 €	241,520.50 €	286,798.00 €	311,780.50 €	426,953.00 €

Comparison to Nowadays Market Price

	Our Price	Market Price
Small Project	€ 4,000.00	€ 5,093.00
Medium Project	€ 8,000.00	<i>no data record</i>
Large Project	€ 16,000.00	€ 31,456.00



<http://lpse.kemenperin.go.id/eproc/lelang/view/1473126;jsessionid=6B03FB5E1666A91193435AC3F9DB8A70>
<http://lpse.bantenprov.go.id/eproc/lelang/view/1598099;jsessionid=F7AF744BE1179DBB88C8B041CE1A849E>

The Conclusion



- The prospect.:

The competition is still fairly easy comparing the number of competitors with the number of the consumers. There is a huge numbers of consumers available but not so many business available yet because of the new regulation from the Indonesian government.

As we can see from the cost calculation, the business is fruitful since the first year. The dividend is relatively high compared to the initial investment. This shows how good the opportunities are.

- The challenges:

We starts of with a quite high initial investment which is reaching 25,463.00 € . Gaining trust from the consumers, government, institutions, and communities is also another thing. To be considered.

Thank
You

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