



ZAP TECHNOLOGY LAO

PLASTIC RECYCLING PROCESSING PLANT IN SAVANNAKHET - A CLEANER FUTURE

DATE:

28/06/2019



BACKGROUND



Since 1988, nearly half of the planet's plastic waste, like single-use soda bottles, food wrappers, and plastic bags has been sent to China, where the material is recycled to make more plastic goods.

On December 31st, 2017, China put a halt to all recycle waste which includes the plastic waste that most Western countries sent to its shores for disposal. This immediate ban created a vacuum of a \$200 billion global recycling industry.

Countries in South East Asia such as Malaysia and Thailand have placed a ban on plastic waste in the 2nd half of 2018. From January to June, before Malaysia froze the importing of plastic waste, Malaysia had received 400,000 tonnes in 6 months. An abundance of plastic waste has nowhere to go, and on the other hand, plastic manufacturers facing a real challenge in obtaining plastic pellets.



Laos is in a strategic position to be the main contributor to the recycle waste industry.

China is now building a railway as part of its Belt and Road Initiative connecting China to Laos. This railway is scheduled to be operational in 2021, it will allow Laos to have direct access to China's enormous market. This will benefit the Laos economy through tourism as well as foreign investment.

Supply of plastic waste can be obtained from neighbouring countries including Thailand and Vietnam, or from overseas via the port from Thailand. Processed clean pellets can be sold domestically or to neighbouring countries including China, Thailand, and Vietnam.

We foresee exceptional opportunity in this plastic recycling industry by having a stronghold to capture the world's demand for recycled plastic and based on our research, Laos permits plastic recycling and it is strategically located next to neighbouring countries known for their industrial and manufacturing capacities.

Plastic has become the largest source of materials that humans cannot live without.

The plastics industry has a history of 120 years. The world volume production of synthetic materials based on plastics has already exceeded the production of all metals. It has become the largest source of materials that humans cannot live without.

Eurostat announced the 2016 global plastics production report, global plastics annual production growth of 4%, the past five years of growth 20% (56 million tons). A total of 335 million tons of plastics are produced, and excess plastic waste has become a problem in many countries around the world.



IMPORTANCE OF MANAGING RECYCLED PLASTIC

A complete recycling system is close to impossible in developed countries, due to high labour and operation costs. As well as different opinions of conservative environmental groups and general bad public perception.

Underdeveloped countries end up receiving the waste and have no proper experience to set up and manage the recycled plastic. With no proper industry standards are in place, It allows high numbers of unsupervised smaller workshops to grow, resulting in polluting the environment.

It's an unavoidable crisis that every country are facing.



Scrapped defective products

From automobile factories, refrigerator factories, air-conditioning plants



Discarded electrical appliances

Refrigerators, mobile phones, laptops and PC, air conditioners, washing machines, televisions, and small appliances



Agriculture sheet and film

Mulch film for crops and the greenhouse film which is widely used in the production of agricultural and animal husbandry



Daily necessities

Plastic wash basins, buckets, detergents, cosmetics, a wide range of packaging product, drinking bottles, takeaway containers, wrappings, air-filled protective packaging, and plastic bags

Complete alternative replacement of plastics will not occur in our lifetime. Therefore finding a solution to tackle the crisis is the key. Countries have been gathering to discuss Plastic Value Chain.

Laos can be the centre of it all. To introduce a standard that's effective and pollution free towards resolving the world's plastic waste crisis.



OUR PROPOSED SOLUTION

The goal for the startup investment is to kick off the process of setting up a state of the art plant for processing recycled plastic in Savannakhet Laos. The size of the plant will make up of several buildings total 15000 square metre. It will be sitting on a 5 hectares land with a 30 years lease with the Special Economic Zone Authority (SEZA) . The total size of the SEZA land is around 330 hectares and our future plans is to utilise the rest of the area to construct an Industrial Park.

The creation of the plant will involve 2 phases over a span of 2 years. At the completed phase it will be used as a functional processing plant as well as a showcase for any interested enterprises to move their operation into the proposed Industrial Park.

The completed plant will feature state of the art filtration water system, power efficiency, various automated plastic processing machines. Will hire over 100 employees with the maximum daily import of 120 tons (recycled plastic) and maximum daily export of 100 tons (plastics pellets).

OFFER TO INVESTORS

- **We are requesting funding of USD2.1 million**
- **Investor/s to own 400 shares (40%)**
- **The Return of Equity (start up investment) in 18 months from commencement of operation**
- **Over 3 years the Return of Investment (ROI) are expected to be around 300%**
- **Expecting the plant to run at full capacity on the 28th month**
 - **producing a daily output of 100 tons of plastic pellets**



STARTUP INVESTMENT

**The startup investment will help to fund Phase 1.
Projected profit in 18 months will return the investor's equity in full.**

	USD	Remarks
Machinery	850,000	Purchasing, Shipping and Installation
Building Cost	500,000	2000 sq metres with 9m in height
Land	330,000	3 Hectares with 30 years lease
Licenses	100,000	Business License, Environmental Compliance Certificate, Import / Export License, Factory License and Legal Contracts
Working Capital	400,000	Staffs wages and other operating costs
Recycled Plastic	1,400,000	Recycled plastic material
Logistics	620,000	Delivery of plastics
Phase 1 Investment	4,200,000	

PHASE 2 INVESTMENT - EXPANSION (REINVEST OF PROFITS)

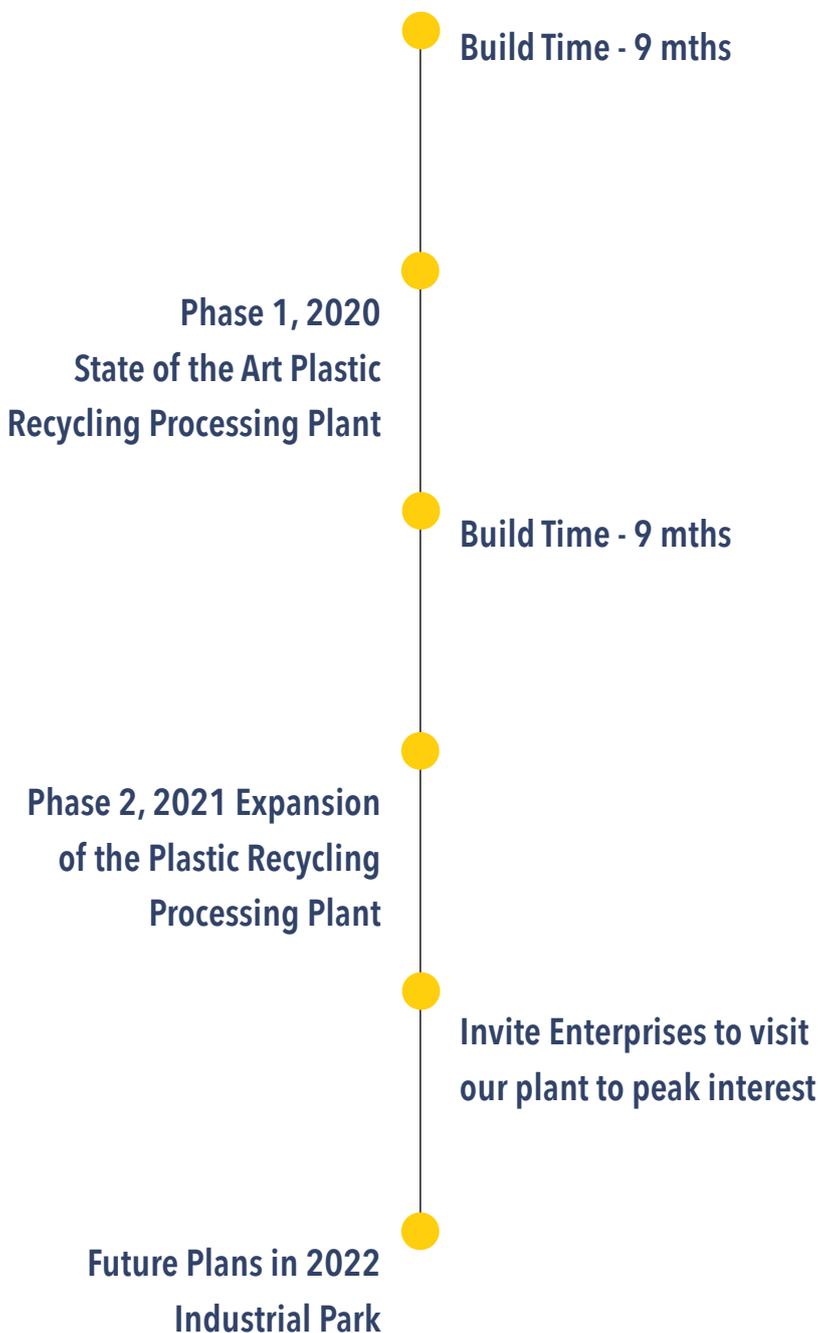
Phase 2 will funded by reinvesting the profit. Rapid expansion of buildings and machines to allow the efficiency of production to reach a daily output of 100 tons.

	USD	Remarks
Machinery	600,000	Purchasing, Shipping and Installation
Building Cost	3,300,000	13,000 sq metres with 9m in height
Land	300,000	2.54 Hectares with 30 years lease
Working Capital	552,000	Staffs wages and other operating costs
Recycled Plastic	2,100,000	Recycled plastic material
Logistics	918,000	Delivery of plastics
Phase 2 Investment	7,770,000	



STRATEGY PLAN AND TIMELINE

A state of the art plastic recycling processing plant will be built in Phase 1 to showcase our standard and innovation. Phase 2 will be involving plant expansion to extend buildings, additional sets of machines to maximise daily output to 100 tons.



**We have secured
50% of the
required funds for
Phase 1, Recycled
plastic suppliers,
Buyers for the
plastic pellets,
Logistics company,
Operation team
with 30 years of
experience, Custom
designed plastics
processing
machines and
Identified the SEZA
Land to built the
processing plant.**



MULTI PHASES PROJECT TIMELINE



Phase 1: Plastic Recycling Processing Plant

Location: Savannakhet - SEZA Zone B1 (28km)

Land Size: 5.54 Hectares

Lease of Land: 3 Hectares

Completion: 9 months (Sep 2019 to June 2020)

Investment Cost: USD\$4.2 Million

Return of Investment: 18 months from commencing of operations

Daily Output: 40 tonnes

Phase 2: Expanding of the Plastic Recycling Processing Plant

Lease of Land: 2.54 Hectares

Completion: 16 months (Feb 2021 to June 2022)

Investment Cost: USD\$7.8 Million (Reinvestment of Profits)

Daily Output: 100 tonnes

Future Plan: Industrial Park

Location: Savannakhet - SEZA Zone B1 (28km)

Initial Land Size: 50 Hectares

Estimate tenants: 15 to 20 factories



PROCESSING COST AND PROFIT ANALYSIS (BATAM VS LAOS)

The first table is an example for the ABS and PE plastics processed in Batam Indonesia and sold to China. The second table shows the estimation in Savannakhet Laos. Other than higher shipping fee in Laos, most of the figures shown below are in favour of Savannakhet.

	ABS (USD/Ton)	PE (USD/Ton)	Remarks
Material Cost	370~420	260~380	
Processing Consumption	20~40	20~50	5~20%
Electricity Cost	25~30	30~35	300~350KW/T
Workers Wages	35~40	35~40	25 USD/day
Equipment Depreciation	8~10	6~8	
Rent and Management Fee	4~6	4~6	
Tariffs and VAT	130~143	90~104	Duty Free (ASEAN) VAT 13%
Shipping Fee	30~35	30~35	Batam-Shanghai \$850/cabinet
Sales Price	1300~1150	1000~800	
Net Profit	485~715	285~425	

Thailand, Vietnam, and China are in the process of building railways and highways connecting to Laos. The shipping fee will continue to reduce with higher logistics demand and better roads.

	ABS (USD/Ton)	PE (USD/Ton)	Remarks
Material Cost	370~420	260~380	
Processing Consumption	20~40	20~50	5~20%
Electricity Cost	25~30	30~35	300~350KW/T
Workers Wages	12~14	12~14	8 USD/day
Equipment Depreciation	8~10	6~8	
Rent and Management Fee	-	-	
Custom and Documentation Fee	41~52	41~52	Custom and Documentation Fee USD500/container
Shipping Fee	102~112	102~112	BKK-ZVK-CHN \$2,200/container
Sales Price	1300~1150	1000~800	
Net Profit	529~761	289~432	



CASH FLOW FORECASTING

Mth	Efficiency	Monthly Revenue	Monthly Expense	Monthly Net Profit (after tax)	Funds for Phase 2 Expansion	Accumulative Funds	Remarks
1	50%	\$504,000	\$314,160	\$172,582		\$172,582	Jul 2020 Phase 1 Commence 40 tons output
2	50%	\$504,000	\$314,160	\$172,582		\$345,164	
3	50%	\$504,000	\$314,160	\$172,582		\$517,745	
4	80%	\$806,400	\$502,656	\$276,131		\$793,876	
5	80%	\$806,400	\$502,656	\$276,131		\$1,070,007	
6	80%	\$806,400	\$502,656	\$276,131		\$1,346,138	
7	100%	\$1,008,000	\$628,320	\$345,164		\$1,691,302	
8	100%	\$1,008,000	\$628,320	\$345,164		\$2,036,465	
9	100%	\$1,008,000	\$628,320	\$345,164		\$2,381,629	Mar 2021 Phase 2 16 months preparation
10	100%	\$1,008,000	\$628,320	\$345,164		\$2,726,793	
11	100%	\$1,008,000	\$628,320	\$345,164		\$3,071,956	
12	100%	\$1,008,000	\$628,320	\$345,164		\$3,417,120	
13	100%	\$1,008,000	\$628,320	\$345,164	\$431,667	\$3,330,617	Jul 2021 Phase 2 Facility Expansion - Reinvesting Profit
14	100%	\$1,008,000	\$628,320	\$345,164	\$431,667	\$3,244,114	
15	100%	\$1,008,000	\$628,320	\$345,164	\$431,667	\$3,157,611	
16	100%	\$1,008,000	\$628,320	\$345,164	\$431,667	\$3,071,108	
17	100%	\$1,008,000	\$628,320	\$345,164	\$431,667	\$2,984,605	
18	100%	\$1,008,000	\$628,320	\$345,164	\$431,667	\$2,898,102	
19	100%	\$1,008,000	\$628,320	\$345,164	\$431,667	\$2,811,599	
20	100%	\$1,008,000	\$628,320	\$345,164	\$431,667	\$2,725,096	
21	100%	\$1,008,000	\$628,320	\$345,164	\$431,667	\$2,638,593	
22	100%	\$1,008,000	\$628,320	\$345,164	\$431,667	\$2,552,090	
23	100%	\$1,008,000	\$628,320	\$345,164	\$431,667	\$2,465,587	
24	100%	\$1,008,000	\$628,320	\$345,164	\$431,667	\$2,379,084	
25	80%	\$2,016,000	\$1,256,640	\$690,327	\$431,667	\$2,637,744	Jul 2022 Phase 2 Commence 100 tons output
26	80%	\$2,016,000	\$1,256,640	\$690,327	\$431,667	\$2,896,405	
27	80%	\$2,016,000	\$1,256,640	\$690,327	\$431,667	\$3,155,065	
28	100%	\$2,520,000	\$1,570,800	\$862,909	\$431,667	\$3,586,308	
29	100%	\$2,520,000	\$1,570,800	\$862,909	\$431,667	\$4,017,550	
30	100%	\$2,520,000	\$1,570,800	\$862,909	\$431,667	\$4,448,793	
31	100%	\$2,520,000	\$1,570,800	\$862,909		\$5,311,702	
32	100%	\$2,520,000	\$1,570,800	\$862,909		\$6,174,611	
33	100%	\$2,520,000	\$1,570,800	\$862,909		\$7,037,520	
34	100%	\$2,520,000	\$1,570,800	\$862,909		\$7,900,429	
35	100%	\$2,520,000	\$1,570,800	\$862,909		\$8,763,338	
36	100%	\$2,520,000	\$1,570,800	\$862,909		\$9,626,247	
Total		\$50,803,200	\$31,667,328	\$17,396,247	\$7,770,000		



OUR TEAM

ZAP Technology Lao are formed by a group of professionals who have extensive experience in various industries and wide exposure in projects, service management, and years of experience in the plastic industries.

Zhang Yang Shan, Director of ZAP Technology Lao

Graduated from Guangzhou Light Industry Technology School in 1985, majoring in plastic processing., worked for Fuzhou Plastic Technology Research Institute of Fujian Province for many years. Founded Fuzhou Yangjie Plastic Co., Ltd., Fuzhou Xinjie Plastic Co., Ltd., Fuzhou Dongli Plastics Technology Co., Ltd., Indonesia's PT.ABPS.technology Batam, ZAP Technology Lao, served as chairman and general manager, engaged in more than 30 years of experience in the advancement of plastic processing technology.

Patrick Lim, Director of ZAP Technology Lao

Graduated in Curtin University majoring in IT and Marketing. Experienced in Project Management and Service Management for various Multinational Corporation, such as British Telecom, Reuters, Serco, spanning across Australia, Hong Kong and Singapore. Involved in setting up Fiona Stanley Hospital, the biggest government-funded project in Western Australia.

Dr Aloun Phonvisay, Deputy Director General of National Institute for Economic Research

Dr Aloun completed his BSC, Master and PhD in Resource Economics in Australia. Working at the Lao National Institute for Economic Research acting as a senior advisor for ZAP technology Lao. His role with the institute allows for cooperation within the high level government officials and specialise in analysing investment in Laos across various industries.

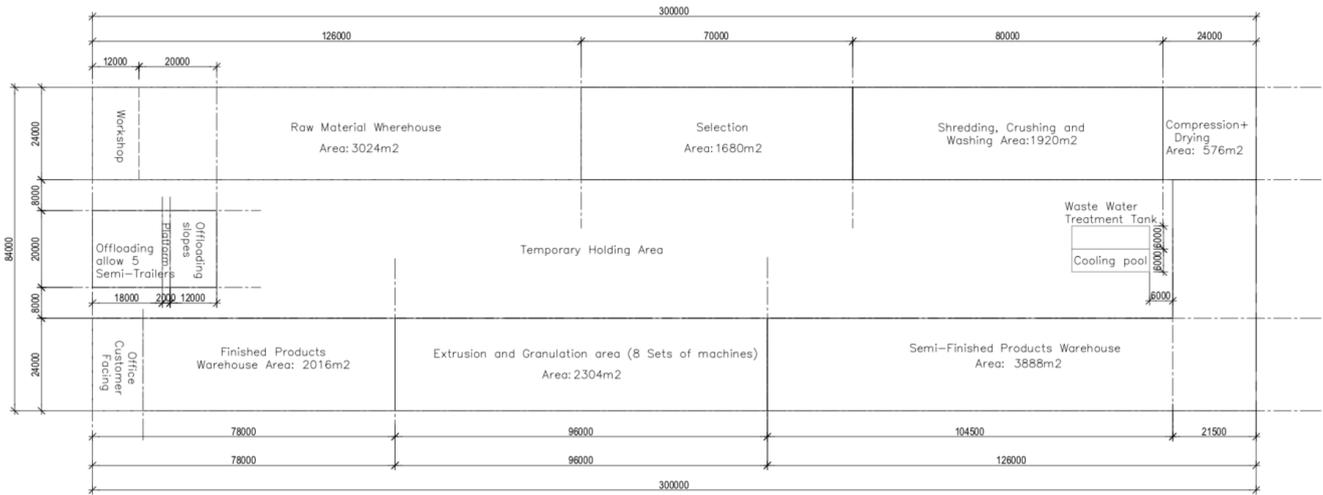
Stefen Chua, Production Manager of PT.ABPS.technology / ZAP Technology Lao

Stefen has been in the recycling business for more than 30 years. He has vast network with suppliers around the world. Responsible for productions, quality and safety for 2 factories in Jakarta and Batam.



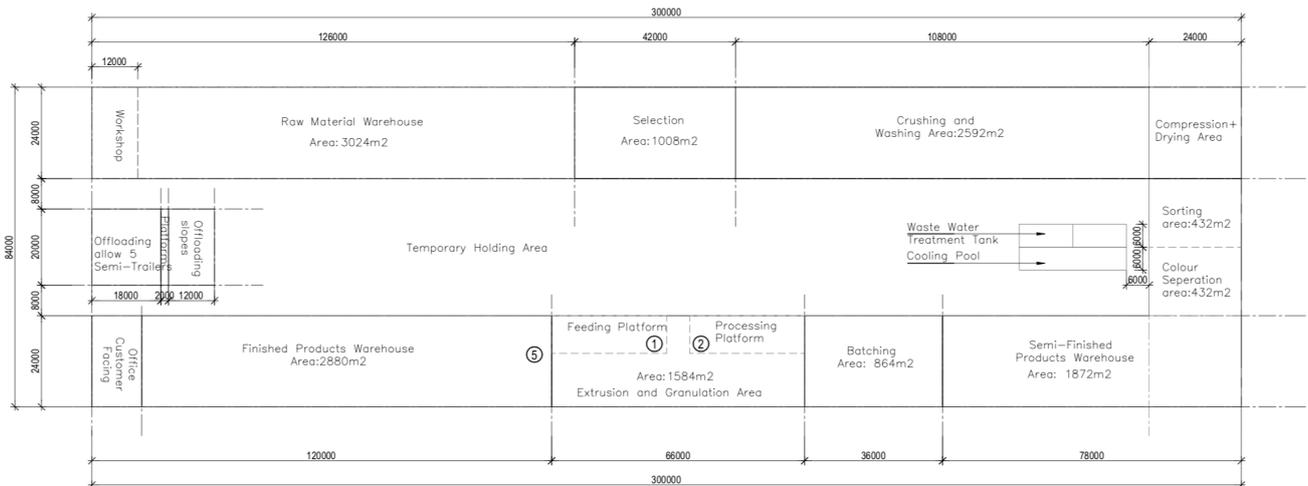
APPENDIX A

Factory Layout: HDPE and LDPE(Monthly Output of 3000 tons)



- Note:
- 1) Floor Area: Length 300m, With 84m, Area: 25200m²
 - 2) Building Area: 15264m²
 - 3) Building Height: 9m with thermal insulation

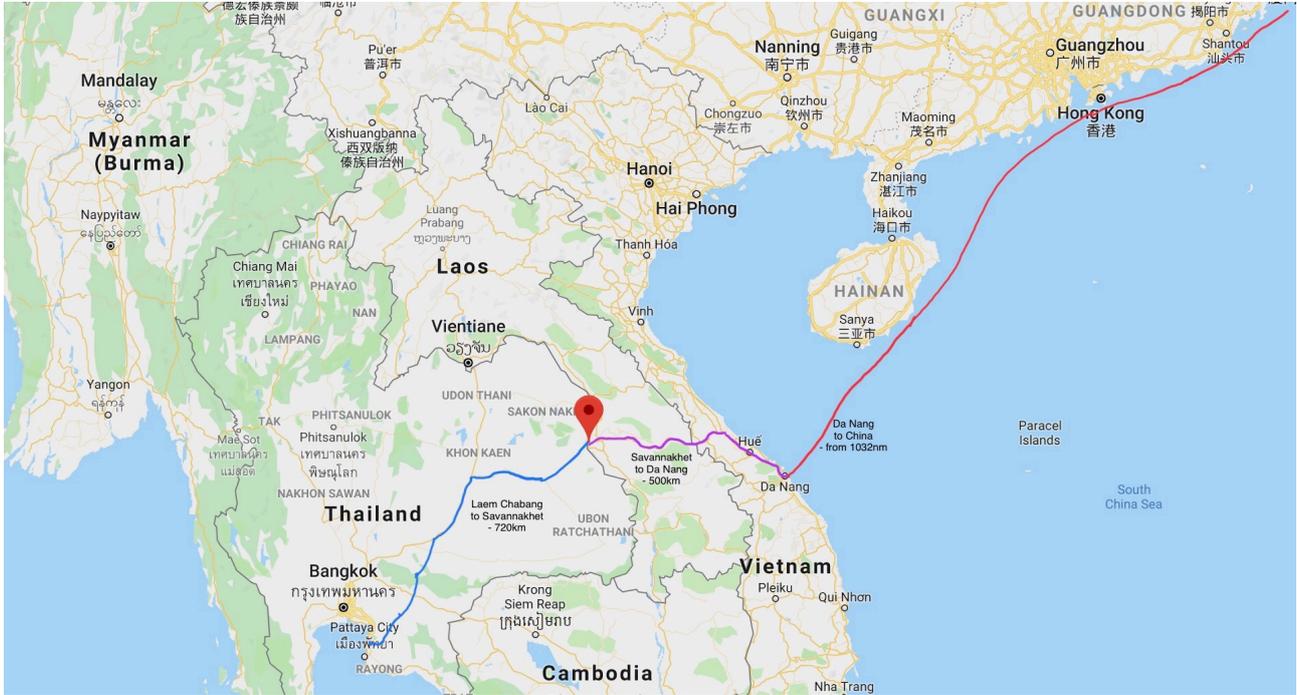
Factory Layout: ABS and HIPS (Monthly Output of 3000 tons)



- Note:
- 1) Floor Area: Length 300m, With 84m, Area: 25200m²
 - 2) Building Area: 15264m²
 - 3) Building Height: 9m with thermal insulation



APPENDIX B



Importing from Laem Chabang Port from Thailand Exporting to China via Da Nang Port Vietnam

Ports Distance by Road

Laem Chabang to Savannakhet
- 720km

Savannakhet to Da Nang
- 500km

Ports Distance by Sea

Da Nang to Xiamen
- 1032nm

Da Nang to Fuzhou
- 1246nm

Da Nang to Ningbo
- 1556nm

Da Nang to Shanghai
- 1607nm

