

RISK MANAGEMENT APPLICATION FOR BUSINESS STARTUPS GREEN PLASTIC IN INDONESIA

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ABSTRACT

Plastic waste has become a global environmental problem. Plastic circulating until now is a synthetic polymer made from non-renewable resources, namely petroleum (fossil-based) and also difficult to decompose (non-degradable) in a short time of about hundreds of years. Bioplastics are plastics that can be decomposed naturally by microorganisms (degradable) in a shorter time of only decades, and are made from nature (bio-based) that can be renewable (renewable). The development of environmentally friendly polymer and bioplastic technology has also begun to develop in Indonesia. Indonesia has also become one of the markets for environmentally friendly plastic products, because of its very large population. Method – Using the ISO 31000:2018 risk management approach. Result – This analysis help Green Plastic startup companies (business opportunity) in making the right decisions to mitigate risks, so that the business can be sustainable.

Keywords: Risk Management, Startups, Green Plastic, Business Opportunity, Indonesia.

INTRODUCTION

The world is experiencing a disruptive phase with the consumption and production of plastic. Existing plastics experience conventional interference with their difficulty in decomposing. Garbage crisis plastic and marine debris are shocking the world. New technology continues to emerge made many developments in the plastics industry. This will definitely have an impact on emerging new business models. Lots of worries, fears, emotions, egos, etc a lot of misinformation such as hoaxes, institutional collisions, activism, policies and unintended consequences.

The process of plastic development from time to time provides many solutions to the desired packaging function is because it is easy to form, sturdy, hygienic and resistant water, and of course cheap. The modern plastics industry began to be established around 1940. But over time, the plastic used accumulates and becomes waste that disturbs the environment. In 2016 the world produced 300 – 400 million tons of plastic waste. Until finally in 2017 the world declared a declaration of war on resistance plastic waste. Governments around the world are supporting the fight against plastic waste including Indonesia. Presidential Decree No. 83 of 2018 states the management of marine waste 25% biodegradable, 5% recyclable, and target in 2025 downstream business. Ministry of Environment and Forestry Regulation 75/2019 also states that there are restrictions on the use of packaging plastic by 2030. In 2022 Nairobi Environment declared for cessation plastic waste.

METHOD

Risk has become part of company life. Risk is something uncertain (uncertain) that can have beneficial or detrimental consequences. Risk management is an action taken to save and protect a company from problems that arise. Information obtained from risk management is very useful for related parties such as investors, suppliers, creditors, shareholders and other parties who have interests (Opan et al., 2022).



Figure 1 GPI Risk Management Framework

Source: Author, 2024

Risk Management Objective

The purpose of PT GPI risk management process is to ensure that the company's vision of being a pioneer in jamu medicine partnerships that is able to adapt to modernization in the health sector can be achieved properly. ISO 31000 provides a structured framework intended to align risk management objectives with organizational needs (Almeida et al., 2019). The scope of risk management implementation must refer to the company's risk management objectives (Kwarta et al., 2019).

Risk Management Principles and Commitments

PT GPI risk management principles include creating and protecting value, integrated, structured, comprehensive, customized, inclusive, dynamic, informational, human and cultural, continuous improvement (BSN, 2018). PT GPI commitment is determined through the roles and responsibilities of all parties through a clear organizational structure from top to low management. The company's top management needs to ensure that risk management is integrated in all company activities, and shows its leadership and commitment (BSN, 2018). The role of top management is very important in carrying out risk management and ensuring effective internal implementation (David, 2012).

Risk Management Framework

PT GPI risk management framework aims to help organizations significantly integrate risk management into their activities and functions. The effectiveness of this risk management activity is highly dependent on the ability and speed of its integration into organizational governance, including in terms of decision making. This requires the support from company's top management level (BSN, 2018).

Risk Management Process

PT GPI risk management process begins with establishing the context of the basic risk parameters related to company's internal and external environment. Risk assessment process is carried out in four stages, namely (1) risk identification, (2) risk impact identification, (3) risk analysis and (4) risk evaluation. In this case, companies can identify based on experience from risk management team, company history and internal data, data trends in the market and conduct discussion groups with experts (Larasati et al., 2020). The results of risk identification activities are not only useful for the company's risk management team, but can also be used as secondary data by the entire company team (Novia et al., 2020). All teams that have been determined in risk management activities must be proactive for identify possible risks that will occur. After the risks have been identified, the next step is to identify the impact from risks. Next, analyze the risks that have been identified by providing assessment (weighting) both in terms of the probability of events and impacts that will be caused using a scale of 1 to 5. The results of the analysis are then evaluated by making an

inherent map which describes the relationship between probability of event and impact.

The risk appetite is determined according to the level of risk, that is ready to be accepted by PT GPI with considering the company's business strategy, operating effectiveness and efficiency also compliance with existing regulations (Febrianti & Novita, 2021). Risk appetite is an acceptable parameter for consistent risk-taking opportunities across the company, and reflects the mutual understanding between management willingness to allow risk resolution in pursuit of the company's strategic objectives. The steps for determining risk appetite include developing, communicating and monitoring and updating risk appetite (Epetimehin, 2013).

Risk treatment will be carried out based on the risk appetite value that has been previously determined. This activity carried out in a systematic way where the risk has been assessed meaning that the risk management can run well (Purdy, 2010). After risk treatment, the results can be concluded in the residual risk map (Novia et al., 2020). Communication and consulting activities in PT GPI risk management were determined at an early stage (David, 2012). In this activity, things related to risk results, causes, symptoms, positive factors, impact, the results of risk analysis and what steps must be taken as an existing risk mitigation action. It aims to assist relevant internal and external stakeholders in understanding risks, the basis for decision making and the reasons why certain actions are needed (BSN, 2018).

Furthermore, monitoring and review activities are carried out on the existing risks. This activity doing routinely, regularly, and involves every part of the company. It aims to ensure and improve the quality and effectiveness of process design, implementation, and results. Ongoing monitoring and periodic review of the risk management process and its results should be a planned part of the risk management process, with clearly defined responsibilities. Monitoring and review should be carried out at all stages of the process. The results of monitoring and review should be incorporated into all management activities, measurement, and reporting of organizational performance (BSN, 2018).

Monitoring and review is part of risk management which involves inspection and supervision (Grant, 2010). The last stage is the recording and reporting of risk management activities. Each risk management process and its results are documented and reported through a clear mechanism. This is so that risk management activities are conveyed to all parts of the company, can provide information for decision making and encourage more active activities (BSN, 2018).

Risk Management Cost

PT GPI requires costs, especially in its risk mitigation activities. The cost of mitigation capital is based on the hurdle rate determined by each section (Baldenius et al., 2007). After that, mitigation cost is submitted for approval by top management.

RESULT AND DISUSSION

Based on the description of the risk management process in the materials and methods section above, the following are the results of risk management discussion at PT GPI in Indonesia. Risk Management Objective PT GPI risk management objectives are divided into three stages that is short-term, mid-term and long-term goals as shown in Table 3.1 below.

Table 1 Risk Management Objective

Category	Goal content
Short-term (Y.0 to <Y.1)	Establish a risk management committee, roles and responsibilities. Identify, evaluate and mitigate very high and high category risks.
Mid-term (Y.1 to Y.2)	Mitigate moderate category risks. Evaluate and improve risk management twice a year.
Long-term (Y>2)	Integrate risk management activities in each departemen, into routine activities. Carry out continuous improvement in risk management.

Source: Saputra, 2021

PT Green Plastik Indonesia to become a pioneer company in making flexible film-based packaging that is reliable, dynamic and environmentally friendly, the goals and targets to be achieved by PT GPI can be seen in table 2.

Table 2 Risk Management Goals and Targets of PT Green Plastik Indonesia

Tujuan	Sasaran
<i>Short Term (year 1st – 2nd)</i>	
Membentuk komite manajemen risiko	Memiliki komite manajemen risiko yang sudah disetujui oleh direktur beserta peran, tanggung jawab tugas dan wewenangnya
Melakukan identifikasi, evaluasi, dan mitigasi	<ul style="list-style-type: none"> • Terlaksananya evaluasi manajemen risiko minimal 1 kali dalam setahun • Menentukan kategori 10 besar risiko, dari internal maupun eksternal • Membuat profil risiko dan penanggulangan risiko
<i>Medium Term (year 3rd – 4th)</i>	

Source: Author, 2023

Risk Management Principles and Commitments

PT GPI risk management principles and commitments are calculated according to the level and organizational structure as shown in Figure 2 below.



Figure 2 Risk Management Organization Structure

Source: Saputra, 2021

Risk Management Framework

PT GPI risk management process basically refers to ISO 31000:2018 as shown in Figure 3 below.



Figure 3 ISO 31000 Risk Management Process

Source: pinhoney.weebly.com

Risk Management Process

Table 3 Risk Identification

Kode	Konteks	Kejadian Risiko	Penyebab Risiko	Dampak
<i>Eksternal</i>				
REM1	Pemasaran	Merek GPI yang belum dikenal	GPI merupakan merek pendatang baru	<ul style="list-style-type: none"> • Perlu usaha lebih untuk membangun reputasi • Target penjualan tidak tercapai
REM2	Pemasaran	Munculnya pesaing sejenis	Pesaing melihat adanya peluang bisnis sejenis	<ul style="list-style-type: none"> • Persaingan ketat antar pelaku bisnis • Beradu reputasi merek • Mempengaruhi pangsa pasar dan harga jual
REM3	Pemasaran	Pelarangan penggunaan kantong plastik	Kebijakan di tiap kota/daerah mengenai kantong plastik	Penurunan pemesanan dari beberapa pelanggan
REM4	Pemasaran	Tidak mencapai standar biaya pelanggan	Banyak pelanggan yang tidak menjadi pemesan atau memilih produk lain	<ul style="list-style-type: none"> • Tuntutan untuk penurunan biaya • Perlu adanya efisiensi biaya
REM5	Pemasaran	Pemesanan pelanggan di bawah MOQ produksi	Tingginya harga produk	Inefisiensi dan cenderung rugi
REM6	Pemasaran	Penjelasan Informasi yang tidak akurat secara holistik dan sebelah pihak	Kampanye hitam yang beredar di masyarakat mengenai <i>greenplastic</i>	<ul style="list-style-type: none"> • Penurunan order • Agresifitas kompetitor langsung dan tidak langsung
REO1	Operasional	Bencana seperti gempa bumi, kebakaran, dsb	Konsleting aruslistrik, atau penyebab lainnya	<ul style="list-style-type: none"> • Terganggu atau hingga terhentinya kegiatan operasional • Keterlambatan pengiriman produk • Hilangnya potensi pendapatan
REO2	Operasional	Pemadaman listrik	Gangguan pasokan listrik dari PLN	Terganggunya kegiatan operasional
REO3	Operasional	Keterlambatan atau terganggunya kedatangan bahan baku	Pemasok yang kurang dipercaya, terganggunya produksi dan pengiriman pemasok	Produksi terganggu atau hingga terhenti
RES1	SDM	Demo warga sekitar	Terganggunya aktivitas dan kenyamanan warga sekitar	Terganggunya kegiatan operasional

REK1	Keuangan	Pelanggan belum mampu membayar tepat waktu, terlambatan atau melebihi Term Of Payment	Penagihan yang tidak tepat waktu, penundaan pembayaran dari pelanggan	Mengganggu alur kas perusahaan
REK2	Keuangan	Kenaikan tarif pajak dan upah minimum karyawan	Kebijakan pemerintah	Laba bersih menurun atau tidak sesuai dengan yang ditargetkan
REK3	Keuangan	Rekonsiliasi bank	Saldo atau jurnal pengeluaran/pemasukan kas tidak cocok dengan rekening koran	Terhambatnya laporan keuangan
REK4	Keuangan	Adanya pencurian inventaris/asset perusahaan	Kurang ketatnya pengamanan di luar maupun di dalam pabrik	Mengurangi inventaris/asset perusahaan
<i>Internal</i>				
RIM1	Pemasaran	Promosi yang tidak maksimal	Tingginya biaya promosi	Kurang dikenalnya merek GPI pada calon pelanggan
RIM2	Pemasaran	Ketidakpuasan terhadap layanan	Keterlambatan penanganan keluhan konsumen	Kepercayaan konsumen berkurang atau hingga hilang
RIM3	Pemasaran	Pemutusan kontrak pembelian	Wanprestasi terhadap perjanjian kerja sama	Hilangnya pelanggan yang dapat mempengaruhi pendapatan perusahaan
RIO1	Operasional	Adanya masalah atau kerusakan pada mesin atau alat lab	Kesalahan pengguna, perawatan mesin dan kalibrasi alat lab yang tidak rutin	Terhambatnya produksi dan COA untuk pelanggan
RIO2	Operasional	Penolakan internal	Tidak lolosnya standar QC	<ul style="list-style-type: none"> • Terhambatnya pengiriman produk • Pengulangan produksi • Penumpukan produk reject
RIO3	Operasional	Penumpukan pesanan	Kurangnya perencanaan produksi	<ul style="list-style-type: none"> • Keluhan dari pelanggan • Kepercayaan pelanggan berkurang
RIO4	Operasional	Ketidak telitian QC	Pengembalian produk atau klaim pelanggan	Kepercayaan pelanggan berkurang
RIS1	SDM	Keterampilan karyawan rendah	Kurangnya pelatihan	<ul style="list-style-type: none"> • Operasional terganggu • Kepercayaan customer berkurang • Potensi hilangnya pendapatan

RIS2	SDM	Turn over karyawan tinggi	Ketidakpuasan terhadap kebijakan manajemen	<ul style="list-style-type: none"> • Biaya pelatihan meningkat • Biaya rekrutment meningkat • Biaya lembur karyawan meningkat
RIS3	SDM	Produktivitas karyawan rendah	Kurangnya pemahaman uraian tugas dan pengawasan kedisiplinan karyawan	<ul style="list-style-type: none"> • Terhambatnya operpasional • Inefisiensi biaya perusahaan
RIS4	SDM	Kecelakaan kerja	Tidak patuhnya pekerja pada prosedur kerja	<ul style="list-style-type: none"> • Gangguan operasional • Peningkatan biaya kesehatan
RIK1	Keuangan	Target payback periode tidak tercapai	Target penjualan tidak tercapai	Hilangnya kepercayaan dari pemasok dan investor
RIK2	Keuangan	Target pengendalian cost operasional tidak tercapai	Biaya produksi dan biaya operasional tinggi	Keuntungan perusahaan berkurang
RIK3	Keuangan	Kekurangan modal usaha	Alokasi dana yang kurang tepat	Perusahaan tidak dapat berjalan
RIK4	Keuangan	Laporan keuangan yang tidak tepat	Terjadi kesalahan pencatatan, tidak melakukan penginputan, bukti transaksi kececer/hilang	<ul style="list-style-type: none"> • Adanya tagihan yang tidak terbayar atau terlewat • Penghambatan perencanaan pembayaran
RIK5	Keuangan	Karyawan melakukan korupsi	Kurangnya kepekaan dan pengawasan terhadap karyawan, bukti pembayaran, dan laporan keuangan	Mengurangi pendapatan perusahaan
RIK6	Keuangan	Terjadi kesalahan pembayaran	Kurang telitinya karyawan keuangan	Reputasi perusahaan menurun
RIK7	Keuangan	Mendapatkan surat peringatan dari kreditur	Tidak terdatanya penagihan	TOP semakin singkat

Source: Author, 2023

Based on the analysis of risk identification from both internal and external factors, there are 32 risks that have the potential to disrupt the smooth running of the green plastic startup business that will be carried out by PT GPI as shown in Table 3.3. Each risk is identified by the causes, symptoms, positive factors (controls) and what impact they can have on the company's business sustainability. Furthermore, risk analysis is carried out by first conducting discussions with the company's risk management team to determine the criteria for the probability and the risk impact value. Table 3.4 below show the value of the

possibility and impact of risks in the PT GPI startup business.

Table 4 Risk Evaluation

Posisi Risiko	Respon Risiko	Tindakan Risiko
<i>Extreme</i>	Risiko tidak diterima	Awas – langsung ditangani
<i>High</i>	Risiko tidak diterima	Siaga – segera ditangani
<i>Moderate</i>	Risiko tidak diterima	Waspada – perlu ditangani
<i>Low</i>	Risiko diterima	Dimonitor dan dievaluasi

Table 5 Risk Inherent Map

P r o b a b i l i t a s		Impact Level				
		1 Insignificant	2 Minor	3 Moderate	4 Major	5 Chatrastrropic
i l i k e l y	5 Almost Certain				REK4 RIO1 RIO4 RIK6	REM3 REO1 REK2 RIS4
	4 Likely		RIS3	REM4 RIK7	REM1 REM2 REM5	REO3 REK1
	3 Moderate			RIO3	RIM1	
	2 Unlikely		RES1 REK3	RIO2	REM6 RIM2 RIM3 RIS2 RIK1 RIK2 RIK3	REO2
	1 Rare			RIS1		RIK4 RIK5

Source: Author, 2023

Table 6 Risk Residual Map

P r o b a b i l i k e l y		Impact Level				
		1 Insignificant	2 Minor	3 Moderate	4 Major	5 Chatrastrropic
i l i k e l y	5 Almost Certain					
	4 Likely		RIO3	REM1	RIM1	REM3
	3 Moderate			REM6 REK1 RIO2 RIS2	REM4	
	2 Unlikely		REO2 RES1	REM5 RIM2 RIS3 RIK4	RIO1 RIO3 RIK1 RIK2 RIK3	
	1 Rare		RIK6	REO3 REK2 REK3 REK4 RIK7	REM2 REO1 RIM3 RIO4 RIS1 RIS4 RIK5	

Source: Author, 2023

Risk Management Cost

PT GPI risk management fees are structured over a five year period. The costs are greatest in the first and second years because of the large initial investment. Meanwhile, costs in the following year were relatively stable with an estimated cost increase of 5% annually.

CONCLUSION

Green plastic business in Indonesia is very potential and must be accompanied by appropriate risk management activities, for the company is able to compete and be sustainable, especially for Startup Company or business. Based on the description above, there are 32 risks that have the potential to disrupt operations business of PT GPI as a startup company. These risks are analyzed based on internal and external factors in the context of marketing, operations, human resources, and finance. There are seven items with very high risk categories and six items with high categories which are the focus of mitigation activities

according to the company's short- term risk management objectives. Five moderate risks will be mitigated in the mid-term and others are acceptable to the company. PT GPI risk management plan is carried out in a structured and sustainable manner based on ISO 31000:2018.

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