

# J<sup>a</sup>ERM Software-as-a-Solution Package



## *Enterprise Risk Management (“ERM”)*

Public listed companies and organisations providing financial services are required by Monetary Authority of Singapore (“MAS”) and/or Singapore Stock Exchange (“SGX”) to implement a suitable risk management programme. The primary objective is to protect the interests of shareholders or service users who are members of the public in Singapore.

An ERM programme essentially identifies risks of all types across the organisation. This enables Management to better understand the potential impact of existing risks to stakeholders. There are ‘good’ and ‘bad’ risks. Should a risk bearing the potential to adversely affect stakeholders’ interest beyond a set level of risk tolerance exist, Management is obliged to address the risk by way of eliminating it or negating the impact on stakeholders.

Risk management is carried out on an enterprise-wide basis so as to avail comprehensiveness in arresting possible bad risks or exploiting ‘good’ risks. The final outcome of an effective ERM programme is the avoidance of ‘bad’ risks and reaping the benefits of ‘good’ ones that will augment bottom-line results. A properly conducted ERM implementation will create a leaner, faster and happier working environment.

While the risk management process may vary between organisations, there are fundamental steps and features that must be present to ensure the integrity of the ERM system. While ISO 31000:2009 provides the principles and guidelines on implementation, adaptation is required to be made so as to fit more purposefully to the organisation’s business profile and operations.

## *J<sup>a</sup>ERM Software-as-a-Solution Key Features*

The J<sup>a</sup>ERM SaaS system is a comprehensive system that organisations can confidently use to implement an ERM programme.

It is a “do-it-yourself” solution that allows implementers to install an ERM programme at their own pace and depth. It is a total solution containing all resources, risk management process and techniques, and documentation that includes reporting features to construct an ERM programme. Training (in video format) is an integral part of the SaaS. Users are led on a step-by-step approach to complete their risk management work. For the Risk Manager, there are training modules on project management, a time implementation plan, and easy customisation tools.

The J<sup>a</sup>ERM SaaS is fully compliant to ISO 31000 ERM standards. Implementers using the software can tune their implementation in varying levels of risk coverage, according to their needs. Needless to say, the higher the coverage, the more comprehensive the management of risks will be. Setting the context (or focus) is an enviable feature of the SaaS – the ERM model can be skewed towards the organisation’s industry and it also focuses on the risk perspectives of each department or function. All these make for an effective ERM programme wholly customised to the organisation.

Key features include:

1. **Customisation** – The software can be customised to meet the needs of any organisation. The Risk Manager follows clear steps to tailor the software to suit the organisation’s needs. There are tools and templates included in the software. After the software has been customized, it is replicated to prepare dedicated copies for various departments to use.

J <sup>a</sup> ERM Customisation				Customisation Notes	
2 Risk Areas and Components					
Core Business Risks		Department's Risk Focus		No of Risks present	select Risk Components
Risk	Component	Risk	Component		
Assets	Facilities	Accidents	People	10	Facilities
Branding	Market	Breakdowns	Process	12	Financial
CSR	Market	Capacity	Facilities	5	Governance
Distribution	Partners	Cost Mgmt	Financial	5	Reputation
Environment	Governance	Credit Risk	Financial	1	Market
Governance	Governance	Customers	Market	7	Materials
Green	Governance	Data	Facilities	1	Partners
Legal	Governance	Delivery Time	Process	9	People
License	Governance	Deterioration	Materials	10	Process
Logistics	Partners	Employees	People	1	Product
Market	Market	Equipment	Facilities		
NGO action	Reputation	Exchange Risk	Financial		

Image 1: Screenshot of a section to be customized by the Risk Manager

1 Bases			Impact Severity				
Financial		Severity	1	2	3	4	5
		180,000,000	180,000	3,600,000	18,000,000	36,000,000	90,000,000
Frequency	5	monthly	QC	QB	QA	QA	QA
	4	annually	QD	QC	QB	QB	QA
	3	3 years	QD	QD	QC	QC	QB
	2	10 years	QD	QD	QD	QC	QC
	1	100 years	QD	QD	QD	QD	QD

Image 2: Sample Risk Matrix to calculate financial impact severity of risk to company. Matrices to indicate severities of risk with respect to human capital, reputation and corporate governance are also included, and can be modified to suit Management's risk appetite.

- 2. Training Modules** – Step-by-step training in the form of videos and audio clips are found all over the software, in strategic locations to aid users with their implementation. The training covers both ERM concepts as well as help on using the software. The User Manual is also provided in the software for the Risk Manager.
- 3. ERM Policy Manual** – An ERM policy manual template (in MS Word format) is included in the software, incorporating risk management principles and practices consistent with ISO 31000:2009 and integrating J<sup>a</sup>BA's methodology.

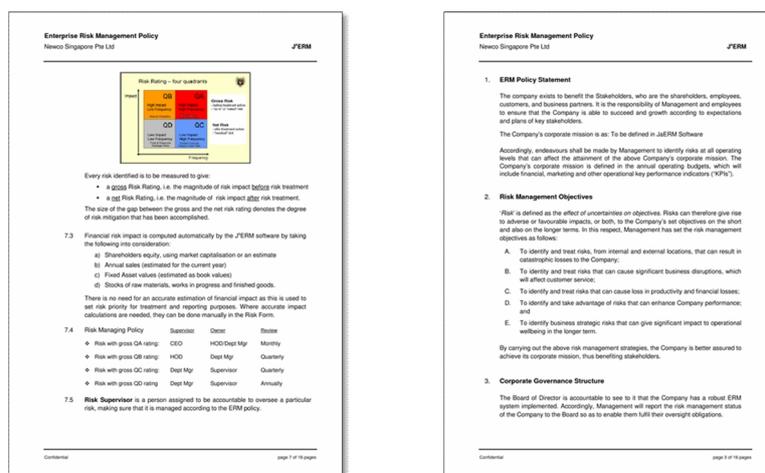


Image 3: Extract of ERM policy manual

4. **Risk Management** – An effective ERM programme has to be focused and also designed to apply to its own risk universe. The J<sup>a</sup>ERM software enables such risk universe to be defined and grouped into risk components. This allows all departments to focus their risk management work on relevant risks, thereby resulting in a comprehensive and exhaustive risk management effort. All these are achieved with the help of the software features.

**Risk Analysis Form** – Risk Officers are guided through the entire risk management process when they complete a Risk Analysis form. The identified risk is firstly analysed and profiled to determine its impact on the organisation, and then prescribed appropriate treatment actions.

In addition, the J<sup>a</sup>ERM methodology employs a unique approach to understand and treat risks through establishing their risky conditions and risk triggers. When this is done, risk treatment is greatly facilitated. The decision to treat risk is based on the organisation’s risk criteria set by Management. The software automatically computes the risk ratings before and after treatment actions are taken.

In filling out the Risk Management Form, Risk Officers are able to focus and drill down the risk to its pertinent level. Subsequent categorisation of risks into *Risk Planes* (strategic, operations or executive) helps to provide clearer direction for Risk Officers in considering appropriate risk treatments.

*Risk ownership* is vital in building an effective ERM programme. The J<sup>a</sup>ERM system requires all risks to be corporatised, and then delegated to their respective operations as *Key Risk Indicators*. This sets clear accountability for risk management which will include *risk owner*, *risk supervisor* and *treatment owner*. Acceptance of responsibility is done electronically, doing away with the need for paperwork.

Company	NewCo File Ltd	Newco	Risk No:	MF-1	Date Review:	27-Sep-12
Department	Manufacturing	Mfr	Risk Owner:	Paul Lim	Production Mgr	

**Mission Statement**

- Company** Manufacture, market and distribute high quality dairy products, and to continually build brand equity so as to provide financial returns to shareholders.
- Department** Manufacture dairy products of quality and highest standards meeting with FDA requirements, and product specifications, so as to fulfill sales requirements.

From Raw Risk List	Risk Description (previously identified at raw stage)	Priority	Financial	People	Reputation	Governance
1	Facilities Cold room refrigeration system breaks down, endangering product safety	4	4	3	4	1

**Risk Definition**  
To render risk treatment more effective, the risk needs to be polished with clarity. Does this risk description sound right?

What is risk object? Old Cold-room refrigeration system  
What can happen? may not have spareparts for maintenance and repairs  
What can result? lead to disruption to production operations.

Old Cold-room refrigeration system may not have spareparts for maintenance and repairs, and could lead to disruption to production operations.

**Part 1 Risk Definition**

**Test 1: Is risk definition correct, is there clarity in object, cause, and consequences?**

- Is the object identifiable? Object can be a physical or non physical object, owned or not owned by you. ?
- Will the object be hit or contacted directly or indirectly by what could happen for it to be affected? ?
- Is the impact identifiable and described quantitatively or qualitatively? ?

**Test 2: Is the risk a 'Risk' or is it something else?**

- Is the 'risk' a probability that could happen in the future, no matter how remote? ?
- Is the 'risk' already manifesting its impact? If so, this is a problem to be solved. Recurring problems are risks. ?
- Is the 'risk' a felt desire for some better situation to replace current situation? ?

**Test 3: What is the 'Risk Type'. Knowing this illuminates treatment considerations.**

- Is the 'risk' accrued through carrying out normal business operations? ?
- Is the 'risk' a result of business decision or strategy adopted by Management? ?
- Is the 'risk' caused by lack of leadership or experience of key employees? ?

<b>Risk Management Summary</b>		Risk Reference:	MF-1	28-Sep-12
<b>Risk Description</b>	Old Cold-room refrigeration system may break down, and could lead to disruption to production operations.	Facilities		0

Risk Analysis	Risk Issues	Treatable?	Effective?	Adopt?	Action points
1	Risky Condition 20-year old compressors prone to breaking down	yes	very	KIV	1
2	Risky Condition OEM are not supplying spareparts anymore	yes	good	adopt	3
3	Risky Condition -	-	-	-	-
4	Risky Condition -	-	-	-	-
5	Risky Condition -	-	-	-	-
6	Risk Trigger Cold-room doors kept opened for too long time (adding more load on compressor)	yes	some	adopt	3
7	Risk Trigger Air-curtains not working	yes	good	adopt	1
8	Risk Trigger Maintenance plan for compressors lacking	yes	good	adopt	2
9	Risk Trigger Some times, large quantities of warm goods are brought into cold-room.	yes	good	adopt	1
10	Risk Trigger -	-	-	-	-

Damage Area	Gross Rating	Net Rating	Change	Remarks by Risk Owner
Risk Frequency	4	2	OD	good improvements
> Financial Impact	4	2	OD	good improvements
> People Impact	3	2	OD	some improvements
> Reputation Impact	4	2	OD	good improvements
> Governance Impact	1	1	OD	not improved or regressed

Value@Risk @ Gross Rating = 1,550,000 @ Net Rating = 55,007 Treatment Costs = 4,920 Risk Treatment Feasibility = Favorable 1,490,073

Electronically approved by: Paul 4/10/2012 12:59  
Electronically authorised by: Jacob Ngiam 4/10/2012 12:59

Risk Owner Authorising Person Accepted for publishing in ERM Report

Image 4: Screenshots of 2 pages of the Risk Analysis Form, with a section for endorsement by relevant persons

**Risk Examples** – There is a myriad of risks present but what is important is the organisation's risk universe. For each risk component, or category, there can be various risk items. The software comes with a bank of more than 200 risk examples. Risk Officers can refer to them and download applicable ones into their Risk Register.

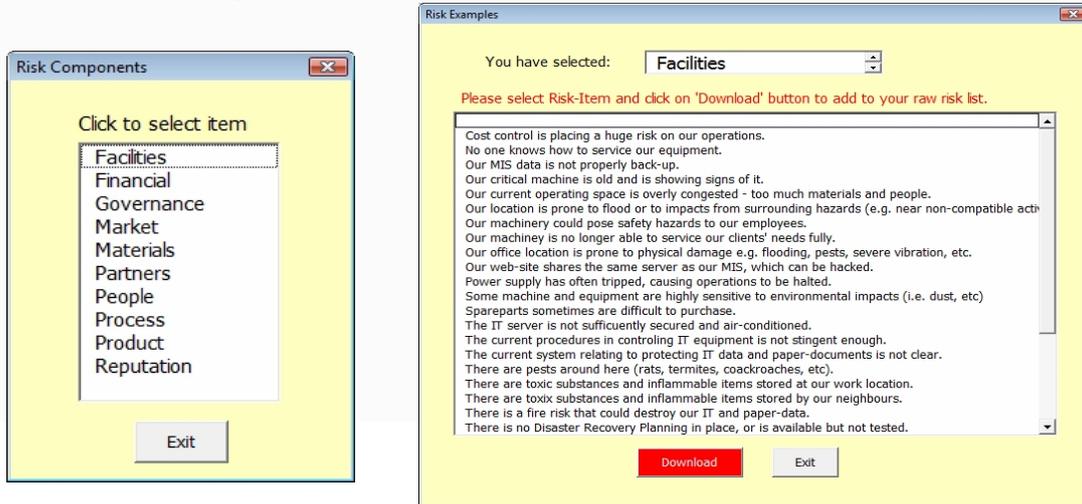


Image 5: Examples of Risk Components and Risk Examples

**Risk Register** - The Risk Register shows the list of all published risks, allowing users to have a quick look at the risk situation for the organisation and/or department. Also published on the Risk Register are the **gross** (i.e. before treatment) and **net** (i.e. after treatment) risk ratings. The Risk Register can be printed for Management reporting.

<b>J<sup>a</sup>ERM</b>		Company	<b>NewCo Pte Ltd</b>				Newco		<b>Risk Register</b>							
		Department	Company	Company	Risk Owner:	Jacob Nglam	Job:		Risk Manager							
<b>Mission Statement</b>																
Company	Manufacture, market and distribute high quality dairy products, and to continually building brand equity so as to provide financial returns of shareholders.															
Department	Manage enterprise risk management programme															
<b>Risk Areas:</b>			Facilities	Governance	Governance	Reputation	Market	Materials	Partners	People	Process	Product				
No	Date	Risk Classification			Risk Description	Cost Savings	Frequency		Financial		People		Reputation		Governance	
		Risk Ref	Type	Area			Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net
1	20/8/12	Mfr-1	O	Mfr	Our current operating space is overly congested - too much materials and people.	0	4	3	4	4	4	3	3	1	2	1
2	15/8/12	HR-1	O	HR	The risk of a pandemic situation can prejudice safety of employees.	0	3	2	3	2	5	2	4	3	5	3
3	1/9/12	Fin-1	O	Fin	Our process procedures are old and needs updating.	21,500	5	3	2	1	3	2	4	2	1	1
4	16/8/12	HR-2	O	HR	We have high staff turnover (in a dept or as a company).	0	3	2	3	2	5	3	3	2	3	1
5	30/8/12	Mfr-2	O	Mfr	There are toxic substances and inflammable items stored at our work location.	0	4	2	3	2	3	2	1	1	2	1
6	21/9/12	IT-1	O	IT	We do not have the latest anti-virus protection in place.	0	4	1	4	2	1	1	4	3	4	3
7	2/9/12	HR-3	O	HR	The risk of a fire-outbreak can prejudice the safety of employees	0	4	2	4	2	4	2	4	2	2	2

Image 6: Screenshot of Risk Register

5. **Report Generation** – Management reports are critical to ensure proper risk communication in the organisation. The software enables such reports and graphs to be compiled. In addition, the Risk Manager is able to summarise the entire organisation’s risk content into an Annual Risk Report, which is sent to Management team, before channeling it to the Risk Management Committee (RMC) and/or Board of Directors for their information.

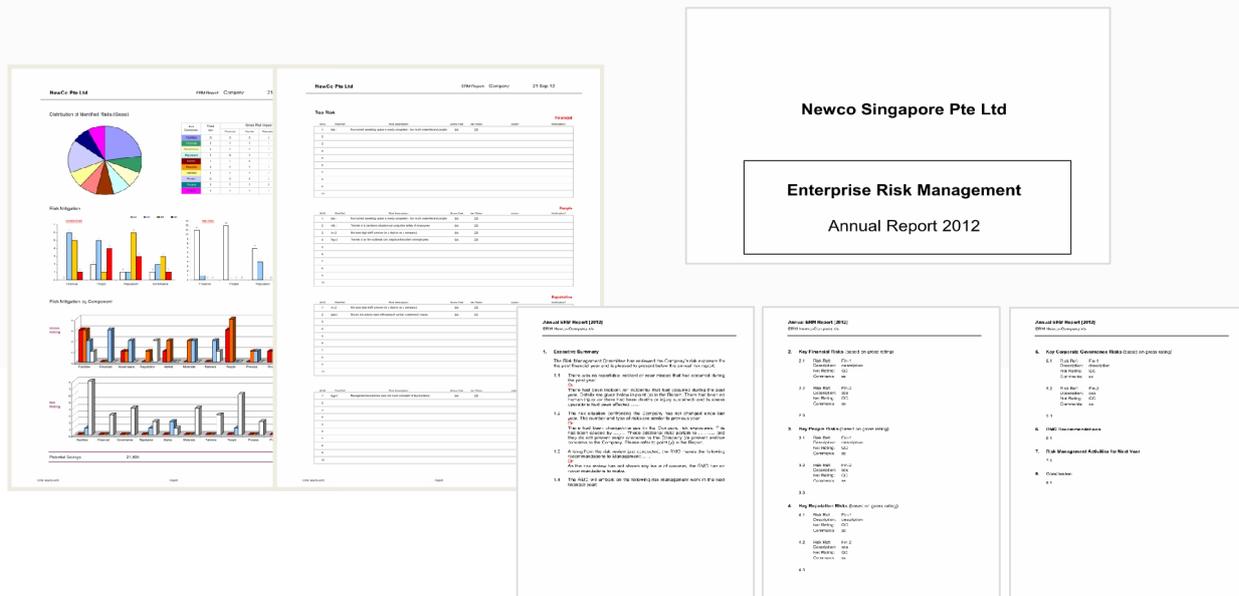


Image 7: Risk graphs (left), and ERM report template (right)

6. **Ease of Updating** – Maintenance of the software is light, requiring reviews and updating to be made on a regular basis. Risk Management is essentially a data detailing the risk status of the company and using an IT solution will reduce maintenance work, as compared to a paper-based one.
7. **Confidentiality and Security** – Every department has its own dedicated software which is password-protected and can be accessed by the department’s Risk Officer and their appointed staff. This means that there is confidentiality and security built into the software.
8. **Additional Features** – Any additional features required could be incorporated by J<sup>a</sup>BA according to the needs of the client, if technically feasible. However, the standard features should already be sufficient to avail an effective ERM system.
9. **Integrating Existing ERM System** – Should any organisation be looking into using J<sup>a</sup>ERM SaaS to manage their current ERM system, J<sup>a</sup>BA could review such possibility and advise the client of its feasibility and cost involved (if applicable).