

*6,Waterloo Street, 4<sup>th</sup> Floor, Kolkata-700069* 

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### **Cyber Security incident handling process document:**

Cyber security incident management is not a linear process; it's a cycle that consists of a preparation phase, an incident detection phase and a phase of incident containment, mitigation and recovery. The final phase consists of drawing lessons from the incident in order to improve the process and prepare for future incidents.

ANJANEY STOCK BROKING LIMITED may not have the necessary in house expertise and skills to respond adequately to a cyber-security incident. When they are facing an incident, they may need to call upon experts to contain the incident and/or to carry out necessary investigations. This does not mean that they cannot do anything themselves. On the contrary, there are a lot of things that can and should be done before an actual incident occurs.

Drawing up a cyber security incident response plan of ANJANEY STOCK BROKING LIMITED is an important first step of cyber security incident management. It is also crucial that management validates this plan and is involved in every step of the cyber security incident management cycle.

#### The following elements should be included in the cyber security incident response plan:

#### Identification of the assets that need to be protected:

- Identification and assignment of responsibilities in the context of a cyber-security incident;
- In house capabilities or contracts with external experts for incident response and/or forensic investigation in case of an actual cyber security incident;
- The equipment and technology to detect and address a cyber-security incident;
- A basic containment strategy:
  - ✓ Disconnect the systems immediately in order to recover as quickly as possible?
  - ✓ Or take the time to collect evidence against the cybercriminal who perpetrated the system?
- A communication strategy for management and for authorities such as Depository and SEBI.

A good cyber security incident response plan can make the difference between a cyber-security incident and a cyber-security crisis. The pace at which ASBL is able to recognise, analyses and respond to an incident will influence the damage done and the cost of recovery. Such a cyber-security incident response plan should not be limited to technology. Processes, people and other aspects of ASBL are also important elements to take into consideration.



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## Important terms to be known for Cyber Security incident handling:

Cyber Security Event- A cyber security change that may have an impact on ASBL operations (including mission, capabilities, or reputation).

- Cyber Security Incident- A single or a series of unwanted or unexpected cyber security events that are likely to compromise ASBL operations.
- Cyber Security Incident Management- Processes for preparing, for detecting, reporting, assessing,
   responding to, dealing with and learning from cyber security incidents.

## **Basic Principles for examine the cyber security incidents:**

- There is no simple one-size-fits-all solution -When it comes to Cyber Security there is no one-size-fits-all solution. What will work for ASBL will depend on its mission and goals, the kind of infrastructure and information we are protecting, available resources, etc. Finally, recognise that some techniques will only be learned with time and experience.
- Top management's commitment Cyber security incidents are a risk that should be incorporated in the overall risk management policy of ASBL. Furthermore, managing cyber security incidents does not just mean applying technology. It also requires the development of a plan that is integrated into the existing processes and ASBL structures, so that it enables rather than hinders critical business functions. Therefore, top management should be actively involved in defining an ASBL cyber security prevention and incident response plan, because top management's explicit support through appropriate internal communication and the allocation of personnel and financial resources is key to the success of the plan. The **Designated Officer** will be aware both of the risks of cybercrime and of his own exemplary role in encouraging all employees of ASBL to assume their responsibility.
- Involve every employee of the Company It is often said that humans are the weakest link when it comes to cyber security. Having said that, it is also important to realise that the employee of ASBL have great potential to help detect and identify cyber security incidents. Make sure that every employee of ASBL is aware of the cyber security incident response plan and of their own role within it; even if this just means informing the right person.
- Keep an offline copy of the documents need during an incident—We have to keep in mind that when a cyber-security incident occurs, we may not always have access to the files on our computer. It is always a good idea to keep a hard copy/offline copy of any document we are likely to need during a cyber-security incident or crisis.



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■ Don't link backups to the rest of the system - When it comes to backups, it is not only crucial to have them. It is also very important to have a backup that is not linked in any way to the rest of the system. If the backup is linked to the system, chances are that the infection of the system also spreads to the backup, which makes the backup useless.

- The importance of logging and keeping those logs during a certain time (up to 6 months) Logs can help to trace back the origin of the cyber security incident. This is not only important to be able to identify the cybercriminal; it will also help ASBL to get back to business as soon as possible.
- Ensure to take all legal aspects into account when managing a cyber-security incident Evidence will only be admissible in Police or cyber security cell if it has been collected in respect of all applicable laws and regulations.
- Document every step of a cyber-security incident—Ensure to note down any action that is taken, such as the reporting of the incident, the collecting of evidence, conversations with users, system owners and others, etc. When something goes wrong it may allow looking back and evaluating where and why the problem started. Furthermore documenting the cyber security incident response will ensure that the knowledge regarding what is going on is not just in a few people's heads.

### Cyber Security Action / Response Mechanism

- IDENTIFY THE ASSETS AND POTENTIAL THREATS—
- ✓ When hit by an incident the first questions that will arise are: which assets are at risk?
- And which of those assets are vital for the business's activity?

ASBL will have to decide which assets need attention first in order to remain in business and keep the damage to business as low as possible. That's why it is crucial to identify, document and categorise ASBL 'vitals': the assets of ASBL depends on to conduct its core activities. This will help to identify where to apply which protective measures and to take quick and justified decisions during the incident management process. The following will give an idea of what those 'vitals' could be: management, company, processes, knowledge (e.g. intellectual property has been stolen), people, information (e.g. data sets have been stolen or altered), and applications (e.g. website is down or defaced, infrastructure (e.g. system and/ or network connections are down), financial capital (e.g. bank accounts). It's also a good idea to identify vulnerabilities and potential threats.



THREATS?-

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HOW TO IDENTIFY, DOCUMENT AND CATEGORISE ASBL VITALS, VULNERABILITIES AND POTENTIAL

#### ✓ Identify the business and the resources that need to be protected

- Determine which are core business activities that enable ASBL to exist, to achieve its corporate objectives and generate income.
- For each of those activities, identify which IT systems (databases, applications, control systems) and network connections are supporting them.
- Determine also where these IT systems are located: on own servers or in the cloud
- When identifying these assets, don't forget flows of information to third parties (suppliers, clients, etc.).

#### ✓ Determine what the crown jewels are

 Determine now which assets, data, processes or network connections are so important for ASBL that we lose (control of) them, we will be in big trouble or even out of business?

#### ✓ Assign business priorities for recovery

• This priority will determine the order in which the systems will be re-established. In most cases the underlying network will need the highest priority, as this is not only the path for system administrators to reach the assets but also the path that cyber criminals use to attack the systems. As long as criminals can use the network connections, any other recovery activity might be undone by them. When assets have equal priorities, parallel recovery activities might be considered.

#### ✓ Document how the systems work and keep this documentation up to date

Ensure that the way systems works is documented and that this information is kept up to date and available on the incident response team's documentation systems.

#### **Especially needed documents are:**

- Network Scheme displaying the network architecture with internal network segmentation and the different gateways to external networks, DMZ, VPN, IP-address ranges used. This scheme should also include the different security devices in place that might contain logging information of network activity (firewalls, (reverse) proxy servers, intrusion detection systems, security incident event management systems). For larger companies with complex networks, it is also necessary to have a high level version of the network architecture so that one can quickly get an idea of the network in case of emergency.
- **Equipment and services inventory**. This inventory will include, for the vital assets in the environment, all the different servers and the network components used for delivering the different corporate services. As some



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of these (physical) servers might be servicing multiple business functions it is important to know per server which services are running on them.

Account and access lists. At all times it is important to know who has the right to access, use and or manage
the network and the different systems in it. This will allow to detect any strange or abused accounts during
an incident

#### ASSIGNING RESPONSIBILITIES AND CREATING A CYBER SECURITY INCIDENT RESPONSE TEAM—

It is important that the roles and responsibilities in case of a cyber-security incident are documented in the cyber security incident response plan.

When drafting the description of these roles and responsibilities, ASBL should ask the following questions:

- Who is the internal contact point for cyber security incidents? And how can he be contacted?
- What are the different incident response tasks? And who is responsible for doing what?
- Who is managing the incident from business/technical side? This should be someone within the company with decision-making authority, who will follow the incident from the beginning until the end.
- Who will communicate with senior management?
- Who can engage the external incident response partner?
- Who can file a complaint with law enforcement/inform the regulatory bodies?

In order to adequately address a cyber-security incident, different skills are needed to take up the different responsibilities and necessary roles of an efficient incident response.

<u>SKILLS</u>	RESPONSIBILITIES	ROLES
Incident	Manage the cyber security incident from the moment	Cyber security Incident
management	of its detection until its closure.	response manager –
		Designated Officer
Business decision	Assessing the business impact and act upon it. Engage	Management
capability	the right resources. Take decisions on how to proceed	
	e.g. decide if the internet connection of a compromised	
	system can be shut down and when is the most	
	appropriate time. Decide when to start clean-up	
	activities. Decide whether to file a complaint or not.	
Network	Technical know-how on ASBL network (firewall,	IT technical support staff
management	proxies, IPS, routers, switches). Analyse, block or	



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restrict the data flow in and out of the network. IT	
operations Information security and business continuity	
Analyse and manage compromised workstations and	IT technical support staff
servers.	
Assess the contractual and judicial impact of an	Designated Officer
incident. Guarantee that incident response activities	
stay within legal, regulatory and ASBL boundaries.	
Filing a complaint.	
Communicate in an appropriate way to all concerned	Designated Officer
stakeholder groups and answer clients immediately	
Handle the aspects of the incident that are linked to	IT technical support staff
• the physical access to the premises	
• The physical protection of the cyber infrastructure.	
	Analyse and manage compromised workstations and servers.  Assess the contractual and judicial impact of an incident. Guarantee that incident response activities stay within legal, regulatory and ASBL boundaries. Filing a complaint.  Communicate in an appropriate way to all concerned stakeholder groups and answer clients immediately  Handle the aspects of the incident that are linked to  • the physical access to the premises

- CYBER INCIDENT RESPONSE TEAM- In an ideal world, every company should have an incident response team that is convened whenever there is an incident. Of course, the size of the company determines the size and the structure of the incident response team. Smaller companies that do not have the resources for an actual team could designate a first responder ideally someone with business decision capability amongst their personnel. In case of a cyber-security incident, he or she should contact external help, but remains the person ultimately responsible for the incident response within the company. The composition of this incident response team will be determined by the different skills that are needed to handle an incident. For smaller companies, some of these skills may have to be found outside the company and contacted by the first responder.
- ✓ HARDWARE AND SOFTWARE FOR CYBER SECURITY INCIDENT MANAGEMENT -To improve the maturity and efficiency of the incident response team, the appropriate tools need to be in place. It is important that the incident response team disposes of autonomous systems and tools that permit them to take care of an incident even if the corporate network has been compromised. This means that when ASBL systems or networks are no longer available, the system of the incident response team still is. Incident procedures and contact lists have to be available on these systems.



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### CLASSIFICATION OF INCIDENTS ON THE PARAMETERS OF RISK CATEGORIES:

Cyber security incident response has become an important component of information technology (IT) programs. Cyber security-related attacks have become not only more numerous and diverse but also more damaging and disruptive. New types of security-related incidents emerge frequently. Preventive activities based on the results of risk assessments can lower the number of incidents, but not all incidents can be prevented. An incident response capability is therefore necessary for rapidly detecting incidents, minimizing loss and destruction, mitigating the weaknesses that were exploited, and restoring IT services.

- The incident response process has several phases. The initial phase involves establishing and training an incident response team, and acquiring the necessary tools and resources. During preparation, ASBL also attempts to limit the number of incidents that will occur by selecting and implementing a set of controls based on the results of risk assessments. However, residual risk will inevitably persist after controls are implemented. Detection of security breaches is thus necessary to alert ASBL whenever incidents occur. In keeping with the severity of the incident, ASBL can mitigate the impact of the incident by containing it and ultimately recovering from it. During this phase, activity often cycles back to detection and analysis—for example, to see if additional hosts are infected by malware while eradicating a malware incident. After the incident is adequately handled, ASBL issues a report that details the cause and cost of the incident and the steps ASBL should take to prevent future incidents
- Periodic risk assessments of systems and applications should determine what risks are posed by combinations of threats and vulnerabilities. This should include understanding the applicable threats, including organization-specific threats. Each risk should be prioritized, and the risks can be mitigated, transferred, or accepted until a reasonable overall level of risk is reached. Another benefit of conducting risk assessments regularly is that critical resources are identified, allowing staff to emphasize monitoring and response activities for those resources.
- ✓ ASBL shall carry out risk assessment to examine the incident and classify them into High / Medium / Low risk as per the cyber security handling document and should take necessary action to minimize the loss and destruction and to prevent the company from such threats and vulnerabilities.

#### REPORTING OF INCIDENT TO CERT – IN



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ASBL should always seriously consider reporting cyber-security incidents to the Indian Computer Emergency Response Team, CERT-IN. Reporting to the CERT-IN is vital in determining whether the incident is isolated or not and allows to keep track of threat trends in India. The CERT-IN will be able to provide some information and advice related to the incident that can help the victim to take effective countermeasures. Furthermore, the information ASBL provides may help to prevent attacks on other computer systems.

#### The following information should be reported:

- Contact details
- The type of the incident
- The date of the incident
- Is the incident ongoing?
- How did ASBL notice this incident?
- What's the impact of the incident?
- Have ASBL already taken actions or measures? If so, which ones?
- Does ASBL have logs or other useful data?
- Who have ASBL already informed?
- What ASBL expecting from the report?

ASBL shall submit the overall details of the incident to Depository and SEBI whether the same has been reported or not reported to CERT-IN. Furthermore, if the incident is not reported to CERT-IN, members shall submit the reasons for the same to the Depository and SEBI.

### FILING A COMPLAINT WITH LAW ENFORCEMENT AGENCIES

Communication to law enforcement authorities must be made as soon as possible after discovery of the cyber security incident, given the volatility of traces and actions that need to be taken (Internet identification, etc.). For prosecution to be successful, the chain of custody needs to be preserved in a legally accepted manner, which requires the evidence to be preserved immediately after the detection of the incident.

Judicial authorities need to possess the available information regarding the incident in order to make a qualification of the offence and proceed with the identification of the suspect. The information that should be communicated to the police in case of Internet fraud (a 'traditional' crime committed by electronic means) may not be entirely the same as the information the police needs in case of IT crime (hacking, sabotage, espionage). In the course of the investigation, additional information will be requested, collected and searched for by the investigators. It is of the



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outmost importance that the services provide the assistance and input requested by law enforcement, to help advance the investigation.

- POLICE: If ASBL is impacted by an incident and as such has been the victim of an offence; ASBL can decide to lodge a complaint. By default ASBL should go to the local police station or the police station of choice. For more complex cases, the local police will get support from the CERT-IN / MHA / Cybercrime police, specialised in dealing with IT crime (hacking, sabotage, espionage). If the case concerns a critical infrastructure or a sector with specific rules, a special procedure may apply.
- CYBER SECURITY CELL: It is also possible to file a complaint directly with a Cyber security cell. This should be
  an exceptional measure. Furthermore, ASBL will probably have to advance the costs of the investigation,
  because the Cyber security cell is conducting it at specific demand.
- INFORMATION TO DEPOSITORY AND SEBI: ASBL shall submit details on whether the incident has been registered as a complaint with law enforcement agencies such as Police or cyber security cell. If yes, details need to be provided to Depository and SEBI. If not, reason for not registering complaint should also be provided to Depository and SEBI.
- INFORMATION TO DOS-MIRSD and CISO OF SEBI: The details of reported incidents and submission to various agencies by ASBL shall also be submitted to Division Chiefs (in charge of divisions at the time of submission) of DOS-MIRSD and CISO of SEBI.

### **Quarterly Reporting of Cyber Incidents:**

The **Designated Officer** of ASBL (appointed in terms of Para 6 of the SEBI Circular dated December 03, 2018) shall continue to report any unusual activities and events within 24 hours of receipt of such Information as well as submit the quarterly report on the cyber-attacks & threats within 15 days after the end of the respective quarter to the respective depositories and exchanges.



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# Most Common Incident types and how to neutralise them:

INCID	ENT TYPE	DEFINITION	POSSIBLETARG	VULNERABILITIES	POSSIBLE
			ET	THAT MIGHT BE	REACTIONS
				EXPLOITED	
Cosial	Facina anima:	Maniaulatian and trialing	Managana	An doorse fit	An doors fit
Social	Engineering:	Manipulating and tricking	Management	As deems fit.	As deems fit.
(Spear)	phising,	someone into revealing			
vishing	(phone	information that (e.g.,			
phising)		password for financial			
		information) that can be			
		used to attack systems or			
		networks			
(spear)	phishing,	Attempt to acquire sensitive	Management	As deems fit.	As deems fit.
vishing	(phone	information (e.g. customer			
phishing	)	logins & passwords) from			
		customers by impersonating			
		a legitimate and trusted			
		person or ASBL.			
Unautho	rised access	When a person gains logical	Customerinform	Password cracked	Patch
		or physical access without	ationCreditcardi	or sniffed	vulnerabilities or
		permission to a network,	nformationAppli	Unpatched system	block exploitation
		system, application, data, or	cationscreatingo	vulnerabilities	Check for
		other IT resource.	rprocessing	Social engineering	malware(rootkits,
			payments	Careless users or	backdoors, Trojan
			Websites and	weak procedures	s)
			services		Change
					passwords or
					inactivate
					accounts Forensic
					evidence
					gathering



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				Block (network)
				access to the
				targeted
				resources
Denial of service	Any attack that provents or	Mail system	Spam filter	Block traffic
Definal of Service	Any attack that prevents or	Mail system	•	
	impairs the authorised use of	Network	weaknesses	Contact ISP
	networks, systems or	appliances	Unlatched system	Disconnect
	applications by exhausting	Application	vulnerabilities	infected
	resources.	servers	Weak configuration	system(s)
		Websites and	of systems or	
		services	appliances	
Malicious code	A malicious code attack is	Any	Unpatched system	Block malicious
attack	any (large-scale)infection or	serverorevenap	vulnerabilities (e.g.	web traffic
	threat of infection by virus,	plianceinthenet	Flash or JavaScript)	Apply patches
	worm, Trojan horse,	workcouldbethe	Anti-virus not	Update anti-virus
	orothercode-based malicious	targetofamalicio	installed, not active	signature files.
	entity	uscodeattack,	or signature file not	Run virus clean-
		but some	up-to-date In	up tool if
		systems have a	appropriate or	available. Run
		higher risk	imprudent user	vulnerability
		profile (e.g.	behaviour (e.g.	assessment tool
		systems directly	using infected USB	to list vulnerable
		or indirectly	memory device)	resources
		connected to		Completely re
		the outside		install infected
		world).		system
		Anyenduserwor		Shut down
		kstationscouldb		vulnerable
		etargetedviae-		services
		mail,USBstorage		Shutdown or
		devices, visits to		disconnect infect
		•		



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		websitesandwe		system(s)
		bapplications,et		
		C.		
In appropriate usage	Aninappropriateusageincide	Payment	Weak management	Inform and get
	ntisanyincidentinvolvinganin	transactionsCre	or control of	advice from
	ternalemployeeorcontractor	ditcardinformati	confidential data	Compliance
	violatingacodeofconductorac	onCustomerco	Bad user password	and/or the legal
	omputerpolicy.Inappropriate	mmercialandper	management	department
	behaviour is not always	sonalinformatio	Lack of segregation	Inactivate users
	malicious and targeted.	n	of duties,	or with draw
	Sometimes a user will simply	Confidential	accumulation of	access rights
	act carelessly or even be	information in	access rights	Make
	completely un aware of the	general	Lack of application	forensiccopiesofl
	standard operating		security or	ogsandothercruci
	procedure or code of		monitoring Lack of	alinformationtotr
	conduct he / she has		procedures	aceandprovewhat
	infringed. The in appropriate		or control to	happened
	behaviour will sometimes		enforce policies	Check logs and
	constitute a serious security		and codes of	other information
	incident in itself, but it can		conduct	for traces of the
	also be the cause or trigger			infringement
	of a serious incident (like mal			
	ware infection, loss of critical			
	data)			
Fraud	Fraud is a kind of	Management	As deems fit.	As deems fit.
	inappropriate behaviour that			
	is inherently malicious in			
	nature, and aimedat			
	personal enrichment by a			
	busing company systems,			



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	applications or information.			
Data loss or theft	This is an incident that	Personal	Personal	Assess the level
	involves the loss or theft of	information	information about	of protection of
	confidential information.	about	employees or	the data, if any
	Information can be	employees or	customers	(encryption,
	confidential because of the	customers	(protected by	password
	value it has for the company,	(protected by	privacy laws or	protection,
	or because it is protected by	privacy laws or	concerns) Credit	specific device
	internal or external	concerns) Credit	card information	required to read
	regulations. Data loss	card	Customer	the data)
	incidents can have a big	information	commercial	Informandgetadvi
	financial impact, due to	Customer	information	cefromComplianc
	possible financial liability or	commercial	Confidentialbalanc	eand/orthelegald
	damage done to the	information	esheetinformation	epartmentorfrom
	company image, should the	Confidentialbala	Confidentialinform	theexternallegala
	information itself or the fact	ncesheetinform	ationaboutcompan	dviser
	that is has been lost become	ationConfidenti	ystrategy,on-	InformCommunic
	public or known to the	alinformationab	goingprojectsandd	ationsdepartmen
	wrong people.	outcompanystra	ecisions,etc.	tandmanagement
		tegy,on-		,defineacommuni
		goingprojectsan		cationstrategy
		ddecisions,etc		Inform the owner
				of the lost or
				stolen data
Brand abuse	This is an incident where	Registration of	Not applicable	Inform police (in
	someone is abusing the	DNS names		case of theft)
	brand and registered	containing the		Request a
	trademarks.	brand		takedown of the
		Spoofing of		website Inform



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website d	esigns customers a	bout
Spoofing	of e- the existence	e of
mail add	dresses this	
and	e-mail	
templates	;	

Change in the Standard Operating Procedure will be adopted as and when required by the company and is binding on all the Staff/Employees/and Directors of the Company.

**Anjaney Stock Broking Limited** 

**Director** 

Dated: 31/03/2023