

718 University Avenue, Suite III, Los Gatos, California 95032 USA

+1 (408) 395-5030

Last Revision Date: September 30, 2020 (Revision E) (MMA-BCP_RevE)

Program Administration

Scope: All Macrotech Marketing Associates (MMA) offices, Supporting Factories, Vendors, Subcontractors, and production sites, worldwide.

Objective: To ensure continuity of all vital business functions, including manufacturing, engineering, sales, customer service, information technology (IT), and finance, in the event of natural and man-made disasters, and other unplanned events that threaten our business function.

The program will keep all vital operations of our business operative during the event.

Business Continuity Organization

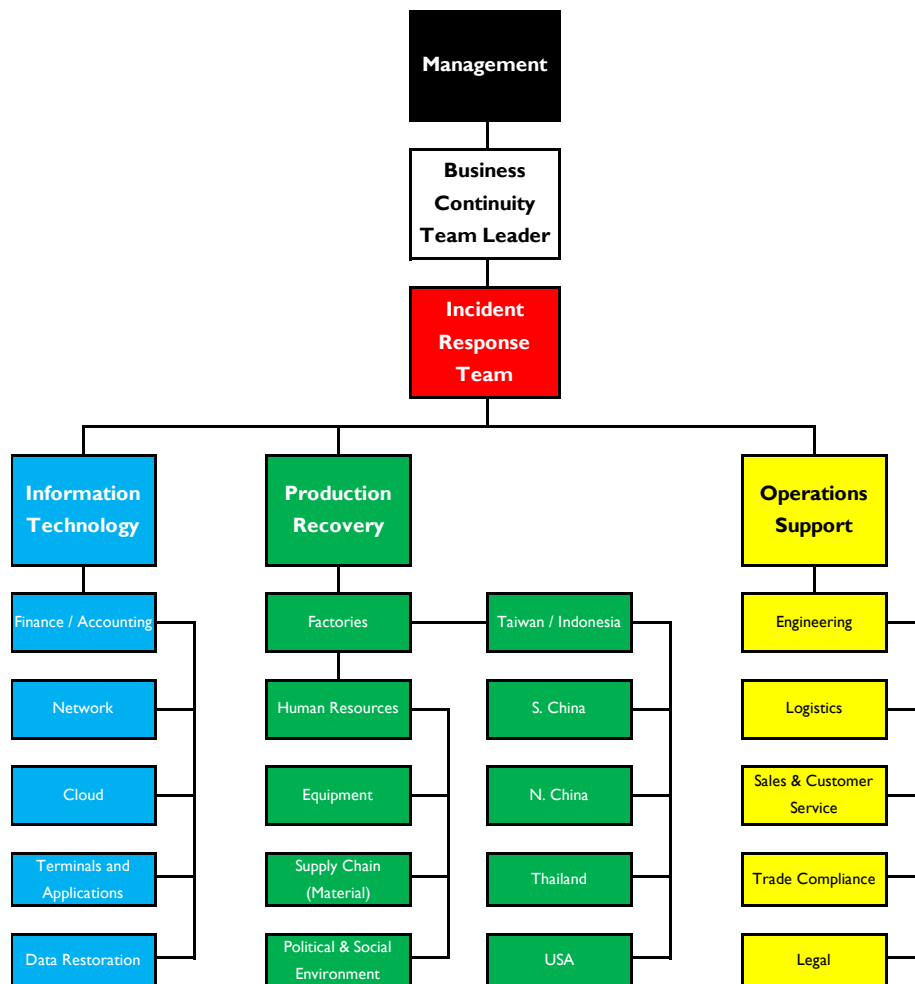


Figure I. Macrotech Business Continuity Team Organization Chart

Business Continuity Contact Information

Team	Member Name	Email	Work Phone	Mobile Phone
Management				
Business Continuity Lead				
Incident Response Team				
Incident Response Team				
Incident Response Team				
Incident Response Team				
Incident Response Team				
Incident Response Team				
Information Technology Lead				
Information Technology				
Production Recovery Lead				
Production Recovery				
Production Recovery				
Production Recovery				
Production Recovery				
Production Recovery				
Operations Support Co-Lead				
Operations Support Co-Lead				
Operations Support				
Operations Support				

Figure 2. Macrotech Business Continuity Team Organization Roster
(FOR REFERENCE ONLY. See latest revision of MMA-BCTOR.)

Business Impact Analysis

In July 2018, MMA completed its biennial Business Impact Analysis (BIA) update. (Refer to MMA-BIA_Rev12.) In summary, the BIA identified:

- The time frames in which essential business operations must be restored to full functionality following a disruptive event.
- The business impact of not performing critical business operations based on a *worst-case scenario. (*Physical infrastructure supporting each respective business unit not accessible for more than 30 days)
- The resources and processes required to resume business operations to a functioning level.

Business Continuity Strategies & Requirements

MMA BIA_Rev12 detailed the complexity of recovery for all business units. From this analysis, MMA formed recovery procedures, resource requirements and logistics for execution of the recovery strategies, including:

1. The minimum number of personnel required for recovery operations at every level and the opportunities for telecommuting.
2. Critical business functions, business unit processes and the Recovery Time Objective for each business unit, detailing the maximum allowable time a process can be inoperative following a disruptive event.
3. Contingency plans related to IT requirements, using manual workarounds to mitigate the disruption caused if disrupted technology capabilities are not able to meet the requirements of the business unit.
4. Shifting production from one facility to another.
5. Increasing manufacturing output at operational facilities.
6. Prioritization of production and reallocation of existing inventory.
7. Contracting with third parties.

Operational Risk & Recovery Plan

MMA's operational risk assessment focuses on incident-specific, site-specific analysis of a range of threats (natural disaster, fire, terrorism, geopolitical events, pandemic, cyberattack, utility outage).

The assessment identified six areas with risk exposure at each site and strategies for restoring the organization to its normal operations and delivery of products and services as quickly and safely as possible:

(Operational Risk & Recovery Plan Cont.)**1) Equipment**

Evaluation of plant property and equipment critical for manufacturing activities is site-specific. The potential impact of a disruption ranges from minor events (utility outage) to major events (fire). Each site presented MMA with strategies to mitigate risk (Refer to BCPs in MMA database from specific sites: XXX-BCP. XXX=Site Code). Where risk mitigation is not possible, MMA identified alternative sites for each location and each product for every customer. (Refer to customer-specific Incident Response Plans in MMA database: XXX-IRP. XXX=Customer Code)

Recovery Strategy & Timeline – Equipment

Site-specific recovery strategies range from the use of on-site mechanics to repair equipment within 24 hours to full-scale replacement. MMA's strategy, where site recovery is not possible, in whole or in part, within 30 days, is to transfer all affected manufacturing to approved alternative sites.

Based on our prior experience (catastrophic flooding, fire, and utility outages), site-specific BCPs and MMA's multi-level sourcing and alternative site plans, restoring normal operation will take hours (minor event) to several weeks (major event). If site Management advises they cannot restore normal operations under their BCP within 30 days, MMA's alternative sourcing will be activated to:

- Transfer all manufacturing of affected products from compromised site to qualified alternative sites (Refer to customer-specific IRP for Alternative Site Plan relative to each customer).
- Transfer any remaining viable raw materials from compromised site to qualified alternative site within 1 week.
- Restore normal production operations within 30 days or standard product lead time, whichever is longer.

BCP Team Lead (Equipment): (See latest revision of MMA-BCTOR.)

Responsibilities:

- Active member of Incident Response Team and Production Recovery Team
- Annual review of factory BCPs and IRPs, identifying vulnerable areas and working with MMA production team and factory BCP team to address vulnerabilities
- In the event of a disruption at any site, Lead is the first point of contact between the manufacturing site BCP team and MMA.
- Once the site IRP has been activated, Lead or delegated Member will be dispatched to the site (major event) to assess the level of MMA BCP response and will be responsible for regular updates and briefing MMA Management until all systems are restored (major or minor event).

2) Information Technology (IT)

Examination of a wide range of potential threats, with focus on the level of business disruption which could arise from each type of disaster. Site-specific IT recovery plans address factory productivity in the event of a planned (backup or maintenance) or unplanned (cyberattack, flood, fire, earthquake, utility outage) event. (Refer to BCPs in MMA database from specific sites: XXX-BCP. XXX=Site Code).

(Information Technology Cont.)

MMA's IT strategies cover reestablishment of connection to manufacturing sites, office productivity and enterprise software so that key business needs are met in the event of a disruption and communication between each manufacturing site and MMA is virtually uninterrupted. The plan includes threats to networks, servers, personal computers, and mobile devices. Manual workarounds are outlined, so operations can continue until computer systems are fully restored.

Recovery Strategy & Timeline – IT

MMA's IT Disaster Recovery Plan (Refer to MMA-ITDRP_Rev2 or latest) outlines strategies to restore the MMA system (hardware, software, data, and connectivity) after planned and unplanned disruptions. MMA's hybrid cloud system guarantees data mobility and security. Multiple office locations, globally, ensures continued communication and operations.

Key triggers for any MMA office that would lead to activation of the IT DRP are:

- Total loss of all communications.
- Total loss of power.
- Loss of physical office/building.
- Building evacuation.

The BCP IT team will be assembled, virtually. The team's responsibilities include:

- Activating alternative employee assignments and, in cooperation with HR, covering roles for employees without access to system.
- Restoring key services within 4 business hours of the incident.
- Recovering to business as usual within 24 hours of the incident.

BCP Team Lead (IT): (See latest revision of MMA-BCTOR.)

Responsibilities:

- Active member of Incident Response Team and Information Technology Team
- MMA liaison to outsourced IT Management services
- Weekly review of backup systems and security
- Weekly review of connectivity to manufacturing sites
- Serve as the focal point of contact for all departments, while designated employees will call other employees to discuss the crisis/disaster and the company's response
- Primary contact for site-specific IT teams, managing IT incidents and MMA's response when site BCPs are activated

3) Human Resources

Plans for on-site personnel, critical to manufacturing (management, engineering, test, QC, line personnel, logistics) are site-specific and included in each site's BCP. (Refer to BCPs in MMA database from specific sites: XXX-BCP. XXX=Site Code)

MMA's BCP activates a series of HR checklists for handling emergencies, based on the type and severity of the event.

Recovery Strategy & Timeline – Human Resources

Recent events (disease-related factory shutdowns and stay-at-home orders) illustrated the need to think about how key staff will function without access to company's physical plants and sites. In the event of pandemic, control order, or similar occurrence, MMA HR will:

- Connect with manufacturing site contact for personnel, assessing impact of the event on personnel and receiving account of MMA employees on site.
- Evaluate need and prepare travel documents for re-patriation or re-location of MMA employees outside of their home country at the time a control order is issued in affected area, within 24 hours of issuance of a control order.
- Activate the all-points, emergency-alert system to keep MMA's global staff informed of changes to country control orders and local restrictions within 2 hours of change of orders.
- Work with MMA IT BCP team to test and ensure connectivity of all MMA employees to company data, critical systems and site-specific data and communications.
- Activate designated off-site roles and responsibilities for each department.
- Send company-wide daily briefing of changes to rules and restrictions related to the event.
- Return employees not in transit to full productivity within 24 hours of stay-at-home/control orders.
- Safely return all employees to their home country or safe alternative location with full business functionality within 72 hours of stay-at-home/control orders.

In the event of a natural disaster, fire, flooding, or terrorist event, MMA HR will:

- Treat seriously injured employees, using first-responder kits and resources located at each site, until first responders arrive.
- Initiate site evacuation procedures, if necessary, including transportation for disabled employees, account for customers and vendors visiting the site and identification of evacuation center(s).
- Activate the all-points, emergency-alert system to keep MMA's global staff informed of any event at any site within 1 hour of the event, including initial incident assessment.
- Connect with manufacturing site HR contact, depending on site-specific BCP, within 1 hour of an emergency or disruption at the manufacturing site, assessing impact of the event on personnel and account of MMA employees on site.
- Inform all personnel of event-specific operational procedure changes and reassign personnel to new duties, if necessary, within 24 hours of the event.

BCP Team Lead (HR): (See latest revision of MMA-BCTOR.)

Responsibilities:

- Active member of Incident Response Team and Production Recovery Team
- Maintains employees' personnel files with support from the IT team, including confidential and sensitive information. Emergency Medical information, Emergency Contact information, Social Security numbers, performance evaluations, disciplinary statements, references, and background check results are mobile and secure within MMA's IT-managed hybrid cloud environment
- Communication of any payroll schedule changes, office/site shutdowns, scheduling changes in the event of a disruptive event
- Coordinates annual first responder training for MMA personnel staff at each site
- Coordinates with MMA HR team for cross-training of employees for jobs identified as essential for re-assignment of employees, as necessary, during a disruptive event

4) Political & Social Environment

Risk assessment of vulnerabilities of both manufacturing site operations and MMA offices due to events stemming from political unrest (riots, terrorist events) to ongoing challenges common in developing regions (utility outages, water supply, government controls, transportation).

Directives for on-site personnel and facilities critical to manufacturing (management, engineering, test, QC, line personnel, logistics) are site-specific and included in manufacturing site BCPs. (Refer to BCPs in MMA database from specific sites: XXX-BCP. XXX=Site Code)

MMA's Operations Support Team and Production Recovery Team are jointly responsible for protocols affecting MMA site response and MMA personnel on-site at manufacturing facilities. These teams not only lead the recovery efforts in the event of such incidents, but also anticipate them.

Recovery Strategy & Timeline – Political & Social Environment

MMA Minneapolis revised response guidelines to political and social unrest after riots threatened transportation, employee safety and office operations in the city in June 2020. The scope and duration of such events is unpredictable and, as a result, implementing alternative plans quickly can be difficult. Regardless of size of the event, several key risks are clear after recent unrest:

- Property and infrastructure damage
- Loss of access to manufacturing or office sites
- Impact on personnel safety and security
- Impact on supply chain

The first three risks are covered by MMA HR's directives when the MMA BCP is activated (refer to Human Resources, MMA-BCP). They are activated immediately in the event of any disruptive event, regardless of scale. The impact on supply chain is addressed in each site-specific BCP and by MMA Production Recovery protocols. Loss of communication, travel hazards and time delays, associated with shipment of materials and cargo can occur due to unrest.

(Recovery Strategy & Timeline – Political & Social Environment Cont.)

To restore normal operations with sufficient speed:

- All-points, emergency-alert system will be activated to keep MMA’s global staff informed of any event at any site within 4 hours of the event, including initial incident assessment.
- MMA Production Recovery Team will connect with affected manufacturing site Management (refer to Appendix, and MMA SCM Directory) within 4 hours of event to assess initial potential impact on material supply, immediate transportation issues, workforce impact, and critical supplier impact. Daily follow up will be conducted until impact is resolved.
- Assigned account managers will contact customers whose production may be impacted by the event within 24 hours, after briefing by MMA Production Recovery Team of supply chain impact.
- Where normal operations cannot resume within 1 week of an event, MMA’s alternative sourcing plan for approved factories and raw material/component suppliers is activated. Normal operations will resume within 30 days or the product’s standard lead time, whichever is longer.

BCP Team Lead (Political & Social Environment): (See latest revision of MMA-BCTOR.)

Responsibilities:

- Active member of Incident Response Team and Production Recovery Team
- Maintains ongoing threat assessment at all operational sites
- Conducts monthly briefing with manufacturing site personnel and MMA office managers, outlining potential threats and, if needed, revising IRP
- Sends monthly threat assessment and any protocol updates to all MMA personnel
- Coordinates with MMA HR team for cross-training of employees for jobs identified as essential for re-assignment of employees, as necessary, during a disruptive event

5) Material

Business continuity planning for all direct and indirect materials needed for production is critical for surety of supply. Materials can be raw materials, components, sub-assemblies, parts, tools, consumables, etc. Each manufacturing site has its own business continuity program; and thus, assesses their own risk exposure for all materials needed. Second source options are identified for critical raw materials. (Refer to BCPs in MMA database from specific sites: XXX-BCP. XXX=Site Code).

A disruption can be as simple as a transportation issue and can be as complex as a pandemic or natural disaster, where raw materials are not readily accessible. The potential impact varies. The 2020 Covid-19 pandemic demonstrated the need to have qualified, second source options and to optimize inventory levels of raw materials to mitigate supply interruptions.

Recovery Strategy & Timeline – Material

Each site has documented its own recovery strategies for ensuring that critical materials needed for production are available. On the front-end, MMA employs a robust sourcing strategy to build resilience against potential disruptions. Having multi-sourcing options is important for surety of supply. Additionally, selecting and developing strong business partners that are experienced in crisis management minimizes the impact of a disruption.

(Recovery Strategy & Timeline – Material Cont.)

In most occurrences, changing the mode of transportation (i.e. sea to air) for obtaining needed materials greatly minimizes the impact from an unexpected event.

MMA's hybrid cloud system facilitates data mobility, and thus access to all bills of material (BOM) amid any disruption to the enterprise.

If a site advises they cannot restore normal operations under their site-specific BCP within 30 days, MMA's alternative sourcing will be activated to:

- Transfer any remaining viable materials from the compromised site to a qualified alternative site within 1 week.
- Restore normal production of affected items to its native state within 30 days or the standard product lead time, whichever is longer.

BCP Team Lead (Material): (See latest revision of MMA-BCTOR.)

Responsibilities:

- Active member of Incident Response Team and Production Recovery Team
- Responsible for maintaining the critical materials list, origin of supply, and alternative sources
- Monitors inventory levels with the support of site-specific Materials Managers
- In the event of a disruption at any site, Lead is the first point of contact between the manufacturing site BCP team and MMA
- Once the site BCP/IRP has been activated, Lead or delegated member will be dispatched to the site (major event) to assess the level of MMA BCP response and will be responsible for regular updates and briefing MMA until the native state is restored (major or minor event).

6) Engineering Support

MMA is committed to providing outstanding, hands-on engineering support which ensures quality control and customer satisfaction. Offering extensive engineering resources to all our valued customers is a top priority. Thus, having a robust, business continuity program for engineering support is essential. We leverage the expertise of factory engineering groups, industrial design houses, and specialized engineering consultancy firms in the USA and Asia. Site-specific business continuity programs are employed to ensure continuous support despite a disruption. (Refer to BCPs in MMA database from specific sites: XXX-BCP. XXX=Site Code).

Recovery Strategy & Timeline – Engineering Support

Though each manufacturing site has its own recovery strategies for ensuring continuous engineering support, MMA has implemented the following to minimize the impact of a disruption and achieve native state status of engineering support:

- Cross training of all critical engineering support functions
- If a disruption impairs or eliminates a site's engineering support functionality, it's support responsibilities will be transferred to another site within the enterprise within 72 hours.
- All bills of material and technical documents are stored in MMA's cloud system to ensure the MMA engineering team and our partners have the tools needed to provide continuous engineering support.

BCP Team Lead (Engineering Support): (See latest revision of MMA-BCTOR.)

Responsibilities:

- Active member of Incident Response Team and Operations Support Team
- Manages MMA Engineering Group's cross training program to ensure continuity of engineering support.
- Primary person in charge of identifying staff replacements in case of personnel turnover.
- Serves as the point of contact with the site engineering teams in the event of a disruption and initiates mitigation strategies.
- Once the site BCP is in effect, Lead or a member of his/her team will be dispatched to the site to collaborate with site engineering staff to assess whether any emergency engineering support is needed to obtain the native state faster.

Incident Management

MMA's Incident Response Plan (*MMA-/RP_Rev8*) allows the organization to monitor, react and manage emergency scenarios. It focuses on a coordinated response to significant operational disruptions, making it possible to invoke continuity strategies quickly and effectively. Strategies include:

- Monitoring tools and designated individuals initiate the incident alert.
- Automatic escalation of event based on pre-defined parameters.
- Activation of Business Continuity Program, globally, based on escalation level.
- Initiation of damage assessment and situation analysis by designated Business Continuity Team members.
- Initiation of recovery plan to ensure continuity of all vital business functions.
- A Post-incident analysis and continuity plan update.

Training, Testing & Exercising

- Training curriculum provided in MMA Employee Handbook (*MMA-EHB_Rev10*)
- Annual test of incident monitoring and reporting executed by designated personnel at each site
- Annual review of incident management and recovery procedures for employees conducted by Incident Response Team

Program Maintenance and Improvement

- MMA completes a biennial BIA, followed by subsequent revision of BCP, as needed, based on current requirements.
- Annual tests of monitoring and reporting
- Annual review of processes and procedures
- Post-incident analysis plan updates, as needed, in addition to corrective action program to address deficiencies

Appendix

References to Related Documents

- MMA Business Impact Analysis (MMA-BIA_Rev12) - Company Confidential [NOT FOR EXTERNAL DISTRIBUTION]
- MMA Business Continuity Team Organization Roster (MMA BCTOR_RevP or higher)
- MMA Incident Response Plan (MMA-IRP_Rev8 or higher) - Company Confidential [NOT FOR EXTERNAL DISTRIBUTION]
- MMA Information Technology Disaster Recovery Plan (MMA-ITDRP_Rev2 or higher) – Company Confidential [NOT FOR EXTERNAL DISTRIBUTION]
- List of Supporting Factories, Vendors & Contractors (See attached Page 13; not revision controlled) – public version available with personnel information redacted at www.macrotechmarketing.com.
- MMA Employee Handbook (MMA-EHB_Rev10 or higher) - Company Confidential [NOT FOR EXTERNAL DISTRIBUTION]

Supporting Factories, Vendors & Contractors

Manufacturing Site	Site Code	Commodity	Alternative Site(s)	Management Contact	Contact Information (Phone / Email)
	CCN	Cable Assembly, Warehouse	LRS, MLU, SBM		
	CMC	Power Cords, Extrusion	KKD, SMN, SBJ		
	GBS	PCB	KCS		
	GDG	FFC	LRS		
	KCS	PCB/PCBA	GBS, LTN		
	KKD	Power Cords	CMC, LRS, SMN		
	LKS	Cable Assembly, Extrusion	LRS, SBJ		
	LRI	Cable Assembly, Power Cords, Automotive	CMC, LRS		
	LRS	Cable Assembly, EMS, Medical, Automotive	LKS, MLU, SBJ, SBM		
	LTN	PCBA, EMS	KCS, LRS, LTN		
	MLU	Cable Assembly	CCN, SBM		
	MXT	Medical, Connectors, Cable Assembly	LRS, NEX, SBJ		
	MYN	Metals	WVG		
	NEX	Connectors, Plastics, Metals	MXT		
	SBJ	Cable Assembly, Medical, EMS, Extrusion	LRS, SBM		
	SBM	Cable Assembly, EMS, Medical	CCN, LRS, SBJ		
	SMN	Power Cords	CMC, KKD, LRS		
	SUD	RF Coax Cables, Antennas, Power Harnesses	LRS, SBJ		
	VEN	Copper Clad Laminate	GBS		
	WVG	Metals	MYN		



Revision History

Rev. No.	Date	Description of Changes	Authorization
A	4/1/2007	Initial Release	AP
B	5/15/2008	Updated for 2008 Summer (Beijing) Olympics	AP
C	10/16/2016	Updated Factory / Manufacturing Site Information	AP
D	3/18/2020	Included Pandemic (Covid-19) Updates	AP
E	9/30/2020	Extensive re-write to incorporate Operational Risk & Recovery Plan section of MMA Incident Response Plan	AP

Distribution & Access

Upon revision and release, this document will be distributed to all active and emeritus members of the MMA Business Continuity Team and MMA Management.

A master copy will be maintained by the Business Continuity Team Leader.

Print copies of this BCP and related IRP are available at the emergency operations center at each operational site.

An electronic copy is saved on the MMA cloud with access granted to all MMA employees.

Redacted versions of this document are available in the public domain at www.macrotechmarketing.com.