NORTHROP GRUMMAN

Corporate Contingency Planning

Theory and Practice

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The Company - Five Operating Sectors

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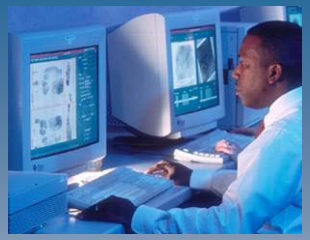
Aerospace Systems

- Large Scale Systems Integration
- C⁴ISR
- Unmanned Systems
- Airborne Ground Surveillance / C2
- Naval BMC2
- Global / Theater Strike Systems
- Electronic Combat Operations
- ISR Satellite Systems
- Missile Defense Satellite Systems
- MILSATCOM Systems
- Environmental & Space Science Satellite Systems
- Directed Energy Systems
- Strategic Space Systems

Electronic Systems

- Radar Systems
- C⁴ISR
- Electronic Warfare
- Naval & Marine Systems
- Navigation & Guidance
- Military Space
- Government Systems

Information Systems



- Command & Control Systems
- Network Communications
- Intelligence, Surveillance & Reconnaissance Systems
- Enterprise Systems and Security
- IT/Network Outsourcing
- Intelligence
- Federal, State/Local & Commercial
- Homeland Security & Health

Shipbuilding

- Naval Systems Integrator
- Surface Combatants
- Expeditionary Warfare Ships
- Auxiliary Ships
- Marine Composite Technology
- Coast Guard Cutters
- Commercial Ships
- Nuclear Aircraft Carriers
- Nuclear Submarines
- Fleet Maintenance
- Aircraft Carrier Overhaul & Refueling

Technical Services

- Systems Support
- Base and Infrastructure Support
- Range Operations
- Maintenance Support
- Training and Simulations
- Technical and Operational Support
- Live, Virtual and Constructive Domains
- Life Cycle Optimization
- Performance Based Logistics
- Modifications, Repair and Overhaul (MRO)
- Supply Chain Management
- Lead Support Integrator (LSI)

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- Five Varied Product Operations but a Consolidated Security Focus
- Corporate Policy J1 “Security” – Seven Major Processes
  - Personnel Security
  - Information Security
  - Physical Security
  - Investigations
  - Fire Protection
  - **Contingency Planning**
  - Security Quality and Oversight
- This is the Common Charter for Security Activity in Every Sector
- Corporate Security Functions Under Enterprise Shared Services. Was Under HR Until Recently; Remains Under HR at Sectors

The Charter

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- Corporate Procedure – “Business Continuity Program”
  - Sub-Procedure – “Definitions” Ensures Common Terminology
  - Sub-Procedure – “Business Continuity Program Guidelines” Provides Planning Outlines and Defines Required Content
- Corporate Procedures are Supplemented and Tailored by Sectors to Address Unique Business Aspects and Issues... BUT
- A Standard Business Continuity Program (BCP) Paradigm Applies at All Company Elements

The Process

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Definitions Focus Operational Philosophy

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- Crisis: "Any unplanned event or situation, including human-caused events and natural disasters, which threatens, or has the potential, to adversely affect the business area/site as a whole in terms of its existence, reputation, values and beliefs, systems, finances, physical plant, or the medical, environmental, and emotional well being of persons within and around the facility."
- Crisis Management: "A top-down, coordinated approach to provide leadership, decide policy, and direct actions to prepare for, prevent, and respond to incidents that escalate beyond the business area/site's normal response capability."
- Critical Process: "Business processes which, if significantly disrupted, would have an adverse impact on the company's personnel, operations, revenue, customer schedules, contractual commitments, or legal obligations."

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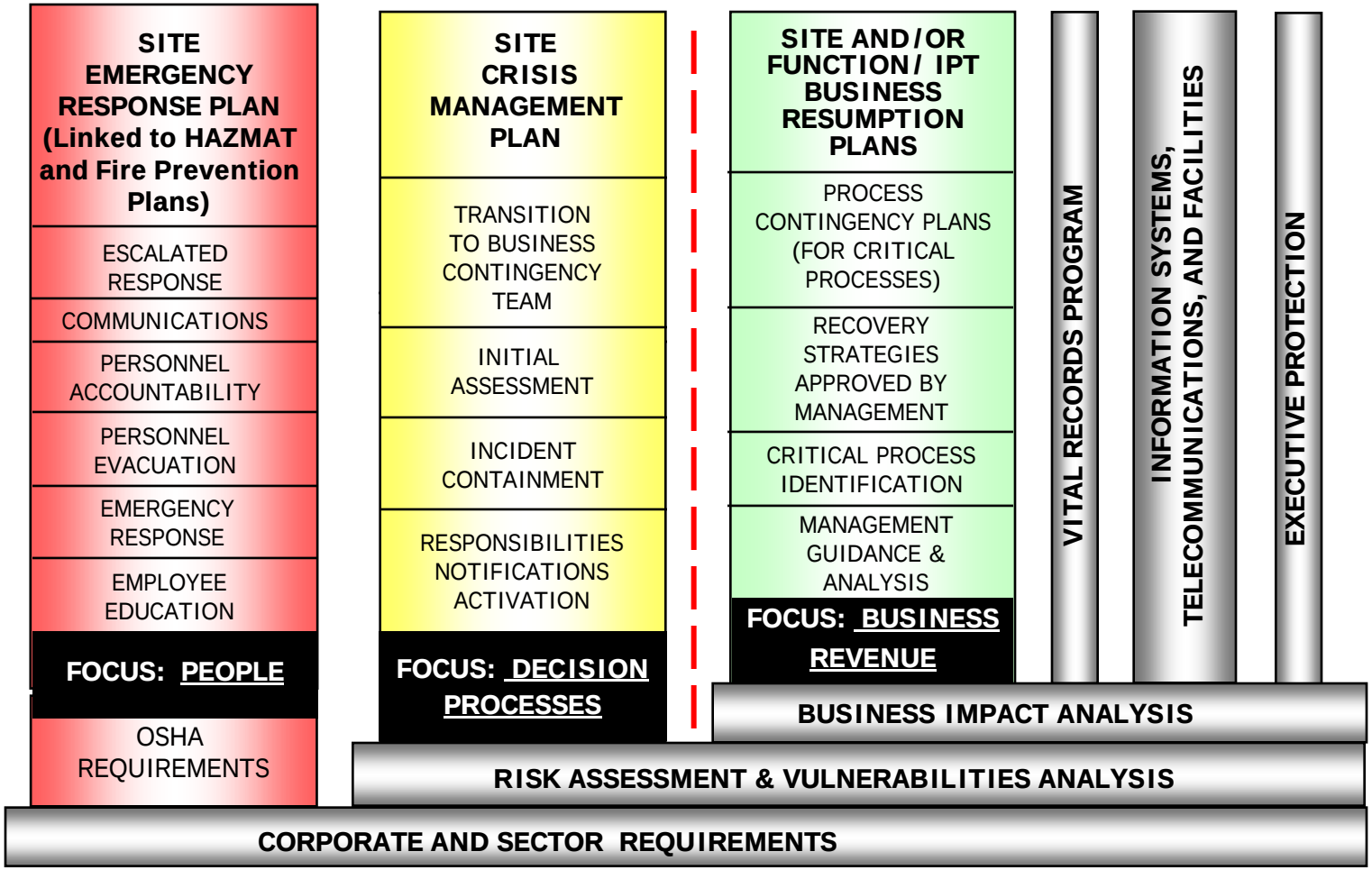

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- The Wide Variety of Potential Emergencies and Business Crises

Types:	**Natural**	**Human**	**Technical**	(Not All-Inclusive)
Medical emergency			Fire (internal and external)	
Bomb threat			Power interruption	
High winds (radar range)			Flood	
Hurricane			Snow storm/Blizzard	
HAZMAT spill			Aircraft crash	
Civil disorder			Earthquake	
Terrorist threat/Attacks			Workplace violence	
Explosion			Tornado	
Law Enforcement actions (raids)			Product quality defect allegations	
Product sabotage			Network penetration/exfiltration	
Denial of Service cyber attacks			Insider threat	
Intellectual property loss			Pandemic	

Scale and Impact Define Problem & Response

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- Enterprise BCP Requires Three Plans be Established, Implemented, Tested and Updated at Least Annually at Every Facility:
  - Emergency Action Plan (EAP)* – What employees are to do in an emergency (Evacuation, Accountability, Recovery, Communication)
  - Crisis Management Plan (CMP)* – How management structures and reacts to deal with any of the multiple types of major or more enduring crises that can occur (CM Team is Defined and Roles Established; CM Room Established; Equipment Pre-Positioned; Checklists Developed for Various Types of Crisis)
  - Business Resumption Plan (BRP)** – How senior management returns things to normal (BR Team Defined and Roles Established; Tasks and Checklists Pre-Determined)

* Security has management responsibility

** Senior business executive has responsibility to restore business activity

Required Planning

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- Priority is on Rapid Disaster Recovery – Physical and Cyber
  - Emergency Response: Survive and Terminate
    - React to the issue
    - Care for the people
    - Restore reasonable normalcy ASAP
  - Crisis Management: Evaluate the New Reality
    - Marshal your resources according to plan
    - Gather data and evaluate the situation
    - Organize to address changed conditions
    - Mitigate collateral fallout
  - Business Resumption:
    - Evaluate losses and quantify restoration needs
    - Tailor the plan from general to specific, test and refine it
    - Execute the plan; get back to business

Priorities

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- Heavy Focus on IT Security and Systems Recovery
  - All Info Systems are Subject to Business Impact Analysis (BIA) – "A documented product that assesses the value and impact of loss or delay in execution of the *critical system(s)* identified by functions."
  - Critical Systems, Determined by BIA, Require an Information System Continuity Plan (ISCP) – "Sets forth the planning actions, procedures, and responsibilities necessary for the short- and long-term restoration of information systems supporting critical business operations."
  - Test Plans are Required and Exercised for Each ISCP
  - Risk, in Lieu of ISCP, May be Accepted by Users for Less Critical Systems – But Users Must Document Their Justification for Risk Acceptance

Businesses Cannot Function Without IT

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- Pandemic Preparedness – A Planning Case Study
  - Early 2006 – Corporate cadre began outlining a plan to address a potential Bird Flu (H5N1) pandemic, to address and mitigate business impacts
  - Earlier SARS concerns, and the predicted inevitability of human-to-human H5N1 infection at some point, dictated the wisdom of advance planning
  - Worldwide situation is already in Phase 3, per United Nations definition
- Pandemic Sub-Team Formed Under Hq Crisis Management Team:
  - Corporate Functions Participating: Environmental, Health & Safety, HR, Security (Chair), Travel, Law, Risk Management, Finance, Benefits, Corporate Communications, Global Supply Chain
  - Team decided advance executive planning was needed to address:
    - Medical/medication practices; Pay policy; Travel restrictions; Evacuation policies; Alternate work locations; Remote access capabilities; Alternate workforce; Quarantine & isolation policy; Allowable & mandatory time off; Return to work process; Coverage for local government lapses

Specific Proactive Planning

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- Pandemic Preparedness – A Planning Case Study (continued)
  - Key communications: Employee awareness – potential threat; general prevention measures; preventive measures to take during Phases 4 – 6
  - Identify essential employees and essential suppliers
- Planning Approach – Outline Company Actions Progressively from Phase 3 (current) Through to Full Phase 6 Pandemic
  - Basic Corporate Plan published in May 2006 with functional enclosures outlining specific tasks, by phase
  - Plan supplements were required from all business sectors
  - We continue to monitor Bird Flu status worldwide
- 2009 Swine Flu (H1N1) Experience Has Refined the Planning Model
  - Relative virulence of a strain is recognized as a more significant factor than simple widespread prevalence, even at Phase 6

Sepcific Proactive Planning

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- The Ultimate Crisis – Hurricane Katrina – A Case Study

- Eight Company Locations Were Impacted in 2005
- Corporate and Cross-Functional Multi-Sector CMTs Acted
  - Assessed Needs and Coordinated Efforts to Deliver Essential Provisions:
    - Food, ice, water, fuel, vehicles, trailers, generators, forklifts, communication capabilities, payroll, physical security.

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- Katrina Recovery
- Business Resilience Benefited from Having the BCP Structure in Place, from Advance Planning and applying a Flexible Focus
  - Swift and efficient action prevented worse business disruption and expedited the return to normal.
  - Within three weeks, power was restored at Ship System facilities and over 10,000 employees were back to work.
    - Remember, Katrina had impacted employee homes, families and lives.
  - Within five weeks, 12,500 employees back to work.
  - Resilience = Rapid Recovery: Benefits both customers and the company.
- Lessons Learned Were Documented – Information Shared
  - Corporate CMT began compiling experience data within 30 days of event.
  - Document shared with CMTs company-wide within 60 days after the event.

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- A BCP Strategy of Partnering with Neighbors Builds Relationships
- Relationships Establish Trust and Pay Dividends
- Example:
  - NGC Corporate Hq Security partnered to develop the Century City Mutual Aid Structure
    - Focus on earthquake, fire, terrorism, civil disorder, crime
  - Worked with Los Angeles PD, Sheriff, Fire, and other Century City businesses, large and small
  - NGC hosted meetings (donuts can draw participation and make friends)
  - Helped draft and coordinate planning documentation
  - Crisis Management Teams and Control Center locations pre-planned
  - Participants and roles defined; contact lists developed

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- The Future Focus – Prepare for and Prevent Major Cyber Crisis
  - Current mitigating actions
    - Consolidate corporate data centers (4) – Better control and organization
    - Decentralize locations – Spread the risk around the compass
  - Cyber Security Operations Center – A Benchmark Operation
    - 24/7/365 security monitoring of networks, servers and desktops
    - Computer security incident response and investigations provides containment, analysis and restoration
    - Digital forensics expertise
  - Cyber Threat Analysis and Intelligence Team (CTA&I)
    - Expertise: East Asia/China military intelligence, information warfare, advanced hacking, malicious systems and software, network security
    - Mission: Identify and stop the Advanced Persistent Threat (APT)

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QUESTIONS?

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