

GLOBAL BUSINESS RESILIENCE & CRISIS MANAGEMENT OVERVIEW

JULY 2023



SECURE CONNECTIONS
FOR A SMARTER WORLD

PUBLIC

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GLOBAL BUSINESS RESILIENCE & CRISIS MANAGEMENT POLICY

- NXP is a **safety and customer focused** company. We take prudent actions to prevent and prepare for issues that may threaten the welfare of our team members, customers, communities and investors.
- NXP cultivates a **resilient culture** in all aspects of our business. We have an integrated Business Resilience Management System modelled after guidelines of ISO 22301 & IATF 16949 section 6.1.2.3.
- **Business Resilience Teams** are established at the global and local levels to anticipate and prevent issues, develop proactive plans and systems, and continuously improve our operations.
- In the event of a major issue, **Crisis Management Teams** are activated at the local and/or global levels, as appropriate.
- NXP is committed to providing **timely and accurate information** to stakeholders affected by an issue.

NXP is regulated through specific governmental agencies. In some locations, certain issues must be reported to government agencies in compliance with their requirements. As such, NXP may be required to keep the existence and details of issues confidential.

Information outside of this overview can be obtained by writing to bcm@nxp.com.



GLOBAL BUSINESS RESILIENCE & CRISIS MANAGEMENT APPROACH

- **Vision**

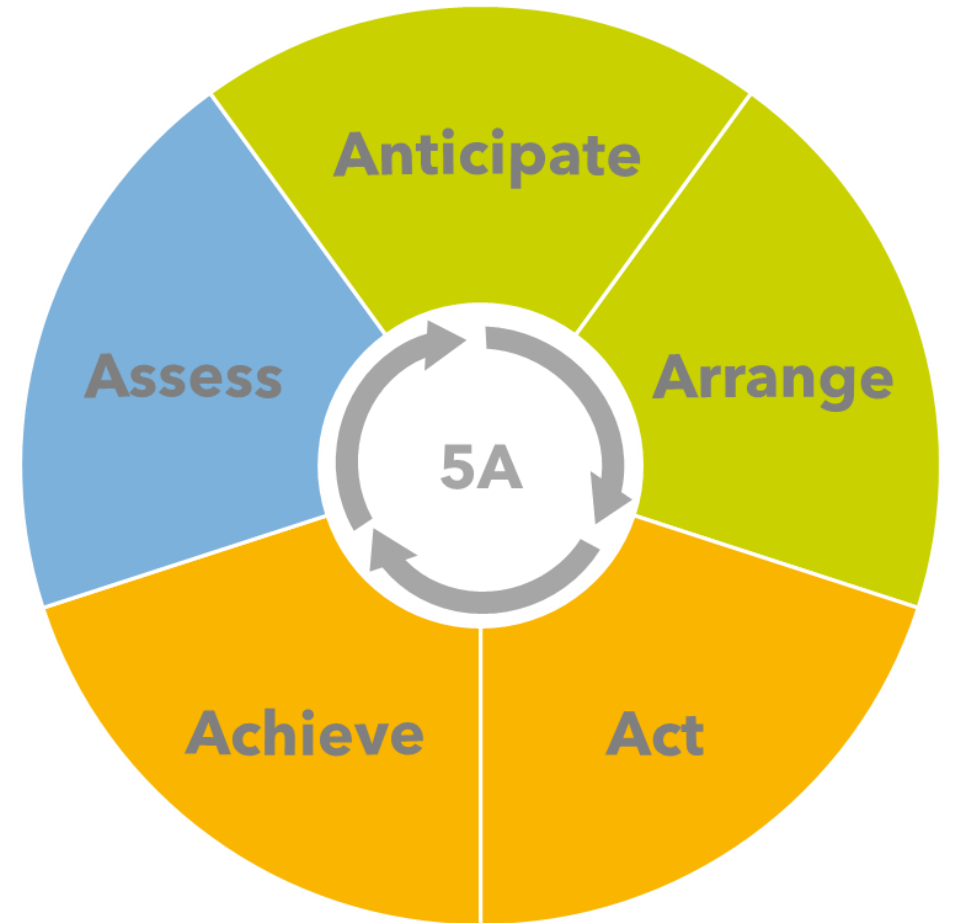
- Customers, investors, team members and communities **trust NXP as the most reliable semiconductor supplier.**

- **Mission**

- **Maximize opportunities and minimize risks.**
- Cultivate **collaboration, alignment and resilience expertise** across functions, levels and locations to drive continuous improvement.
- Integrate innovative processes, comprehensive systems and a **resilient culture so we thrive and grow stronger.**

- **Methodology**

- 5A Model: **Holistic** blend of proven best practices.



GLOBAL BUSINESS RESILIENCE & CRISIS MANAGEMENT APPROACH

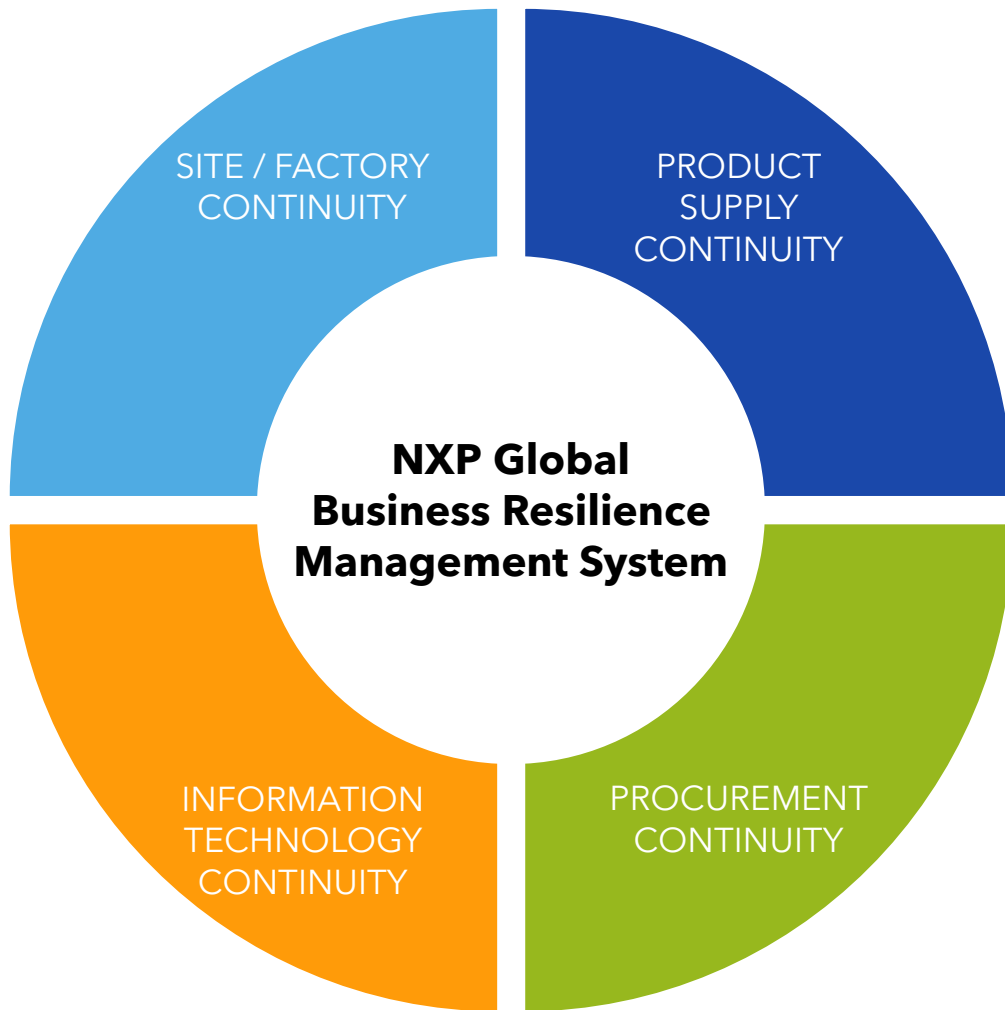
- Methodology:



- Stakeholders:

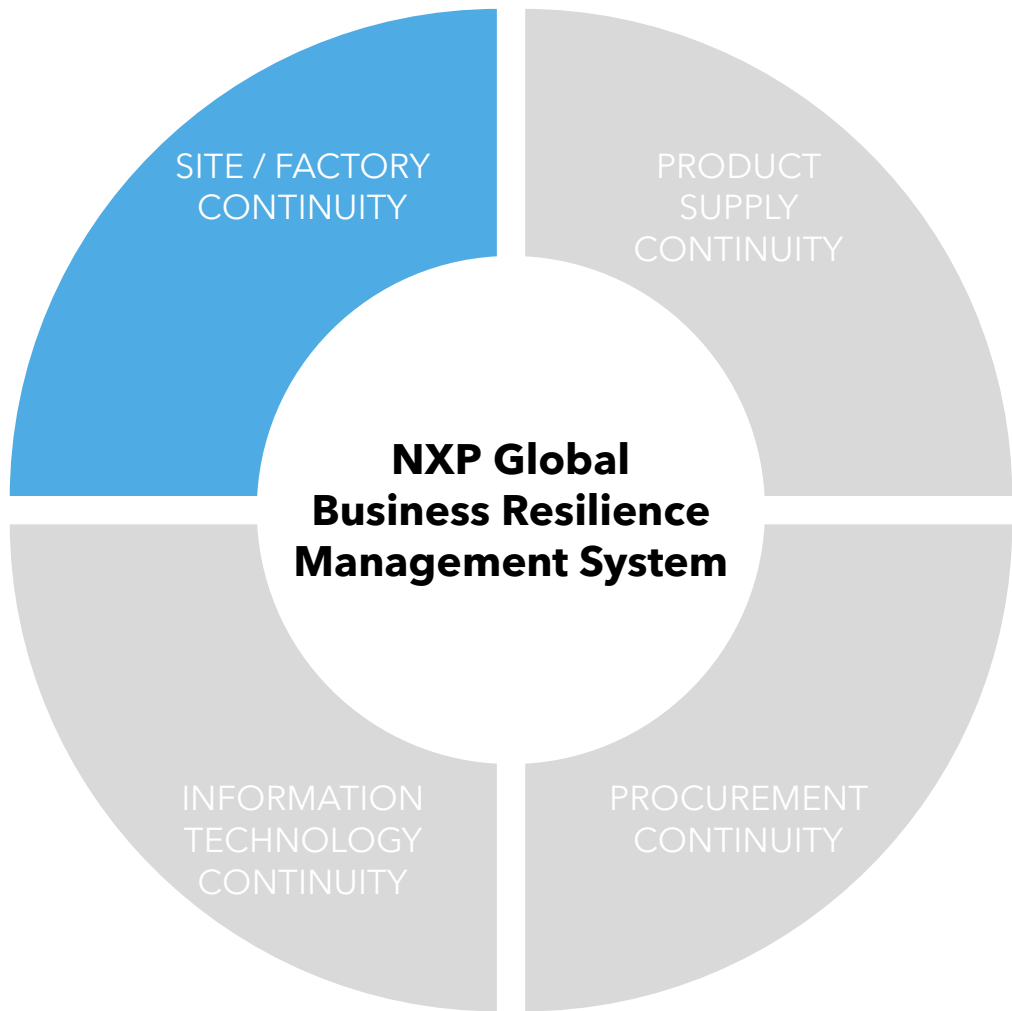


FOUR KEY FOCUS AREAS FOR CONTINUITY



- Coordinated through the Global and Local Business Resilience Teams.
- Each area focuses on a specific operational risk.
- Other business functions are integrated within each area.
- During a crisis, all areas interact with and complement each other through the applicable Crisis Management Team.
- Plans are reviewed annually and more frequently if significant changes occur.

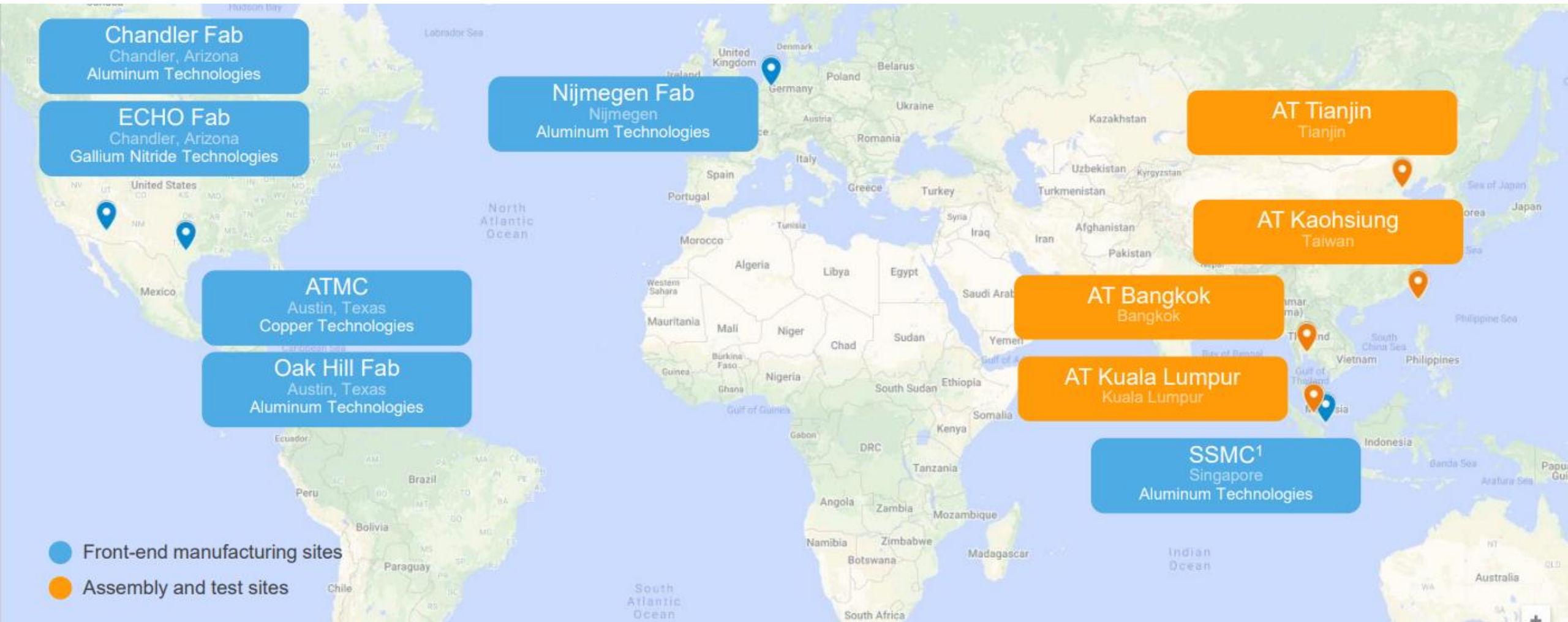
SITE / FACTORY CONTINUITY



ASSURES OPERATION OF SITE ASSETS

- Impact Analyses and Risk Assessments focus on areas of likelihood and severity for various event scenarios (considering recovery time from an incident).
- Mitigation actions are defined and tracked, with corporate guidance and oversight, to reduce likelihood and/or severity of risks.
- Teams receive specialized training and conduct regular exercises.
- Certified: ISO14001, ISO45001, ISO9001, IATF16949.

NXP INTERNAL FRONT-END MANUFACTURING AND ASSEMBLY & TEST SITES



Certified For: ISO14001, ISO45001, ISO9001, IATF16949.

Insurer Risk Engineering Rating Scale: Poor, Fair, Average, Good, **Excellent.**

¹ SSMC is a Joint Venture

PREVENTION - RISK MANAGEMENT FOUNDATION

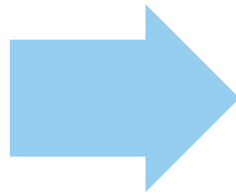


- Each NXP factory has identified potential risks that could have an impact on **product supply to end customers**. These include:
 - Facilities systems and utility infrastructure (electricity, water, etc.).
 - Factory equipment and systems.
 - Regional risks (natural hazards).
 - Supply risks (wafers, chemicals, gases).
 - Other risks (HR, IT, Legal).
- Each NXP factory regularly updates Impact Analyses and Risk Assessments to **identify preventive actions and reduce risk to us and our customers**.
 - Failure Mode Effect Analyses (FMEAs).
 - Utility & Infrastructure Assessments.
 - Business Impact Analyses.

BUSINESS IMPACT ANALYSES

- Each NXP factory assesses risks for potential business impact.
- Risks are scored for Likelihood of occurring and Severity of impact.
- To reduce risk to us and our customers, mitigation actions are defined and tracked, with corporate guidance / oversight.

Risk Categories and Examples	
Asset	Fire / Explosion
Asset	Machinery Breakdown
Asset	Water Damage
External	Gas Leakage
External	Key Services Supplier Failure
External	Civil Unrest, War, Terrorism
HR	Loss of Key People / Knowledge
HR	Sabotage / Malicious Acts
HR	Pandemic
IT	Loss / Damage to Critical Data
IT	Building Mgt System Failure
IT	Breach of Network Security
Legal	Loss of Key People / Knowledge
Regional	Earthquake
Regional	Flooding
Regional	Tornado, Tropical Storm, Typhoon
Supply	Wafer Availability
Supply	Chemical Availability
Supply	Spare Parts
Utility	Power Outage
Utility	Failure of Cooling Equipment
Utility	Loss of UPW



Impact Areas
Financial Global
Financial Local
General Environmental & Social Impacts
Workplace Health & Safety



Risk Rating	Score Between	
Low	1	4
Medium	6	16
High	24	32
Very High	36	64

Each of the 50-60 **Risks** are evaluated in each of the **Impact Areas** at each **Factory**.
~2,000 aspects assessed.

The *recovery days needed*, and *likelihood* are factored into the overall score for each risk scenario.

GEO/ENVIRONMENTAL HAZARD EVALUATION

- Within the impact analysis and risk assessment, we incorporate likelihood ratings of natural hazards.
- The scores are sub-national (local) and presented on a scale of 0 - 10 (almost certain - very unlikely).

Name	SSMC	Chandler	Oak Hill	ATMC	ICN8	ATKL	ATTJ	ATBK	ATKH
Flood Hazard Index	10	10	10	10	10	10	8	10	7
Seismic Hazard Index	9	9	10	10	9	8	8	9	3
Tropical Storm and Cyclone Hazard Index	10	10	10	10	10	10	10	10	2
Tsunami Hazard Index	4	10	10	10	10	10	10	10	8
Wildfire Hazard Index	10	5	7	7	8	10	7	8	8
Severe Storm Index	2	7	4	4	8	1	5	2	4

Maplecroft Scores and Definition	
0-2	Almost Certain
3-4	Likely
5-6	Possible
7-8	Unlikely
9-10	Very Unlikely

Source: Verisk Maplecroft

Site Code	City	Country	Address	Latitude	Longitude
SSMC	Singapore	Singapore	70 Pasir Ris Industrial Drive 1, Singapore 519527	1.382669	103.934870
Chandler	Chandler	USA	1300 North Alma School Rd, Chandler, AZ 85224	33.3254525	-111.863586
Oak Hill	Austin	USA	6501 William Cannon Drive West, Austin, TX 78735	30.237199	-97.8694565
ATMC	Austin	USA	3501 Ed Bluestein Blvd, Austin, TX 78721	30.2696225	-97.665188
ICN8	Nijmegen	Netherlands	Gerstweg 2, 6534 AE Nijmegen, Netherlands	51.8244369	5.819836
ATKL	Kuala Lumpur	Malaysia	No. 2 Jalan SS 8/2 FIZ Sungai Way, Selangor Petaling Jaya, Selangor 47300 Malaysia	3.0857352	101.612458
ATTJ	Tianjin	China	No. 15 Xing Hua Ave, Xiqing Economic Develop Area, XiQing, Tianjin 300385	39.129498	117.251038
ATBK	Bangkok	Thailand	303 Moo 3 Chaeng Watthana Rd, Talat Bang Khen, Lak Si, Bangkok 10210, Thailand	13.8813611	100.586623
ATKH	Kaohsiung	Taiwan	10, Jing 5th Road, NEPZ Kaohsiung, Taiwan 81170	22.4307	120.181100

PREVENTION - FACILITY SYSTEM RELIABILITY



- Continuous uptime, without fail, is required for factory operation.
- Significant measures are taken to ensure **high reliability**, including:

Life Safety Systems

- Continuous toxic gas monitoring and high-sensitivity smoke detection.

Prevention

- **Facility Equipment**

- **Designed redundancy.**
- **FMEA/Risk assessment.**
- Comprehensive preventive maintenance and monitoring, including predictive.
- Onsite inventory of critical spare parts.
- **Standard work instructions** and extensive OTJ training.

- **Structured Problem Solving**

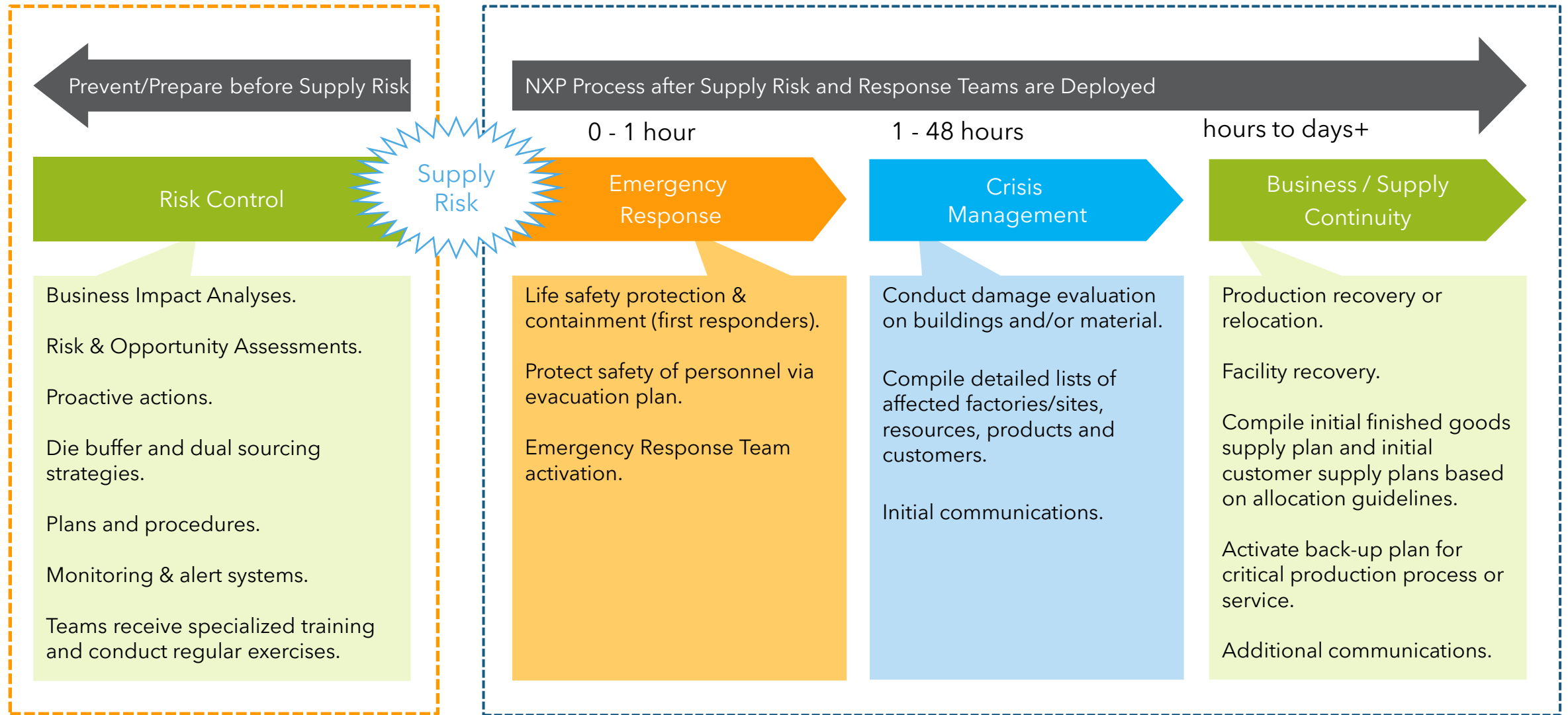
- Incident & Near Miss **5-Why / 8D / Root Cause analyses.**
- OCAP - Off-hours on-call program to ensure quick response.

- Plans for effective containment and to prevent further impact.

Process Monitoring and Control

- Continuously staffed control rooms with **real-time alarms.**
- Data trending & storage of critical parameters with **performance KPIs.**

RISK MANAGEMENT TIMELINE



Prevent/Prepare before Supply Risk

NXP Process after Supply Risk and Response Teams are Deployed

Risk Control

Supply Risk

Emergency Response

Crisis Management

Business / Supply Continuity

- Business Impact Analyses.
- Risk & Opportunity Assessments.
- Proactive actions.
- Die buffer and dual sourcing strategies.
- Plans and procedures.
- Monitoring & alert systems.
- Teams receive specialized training and conduct regular exercises.

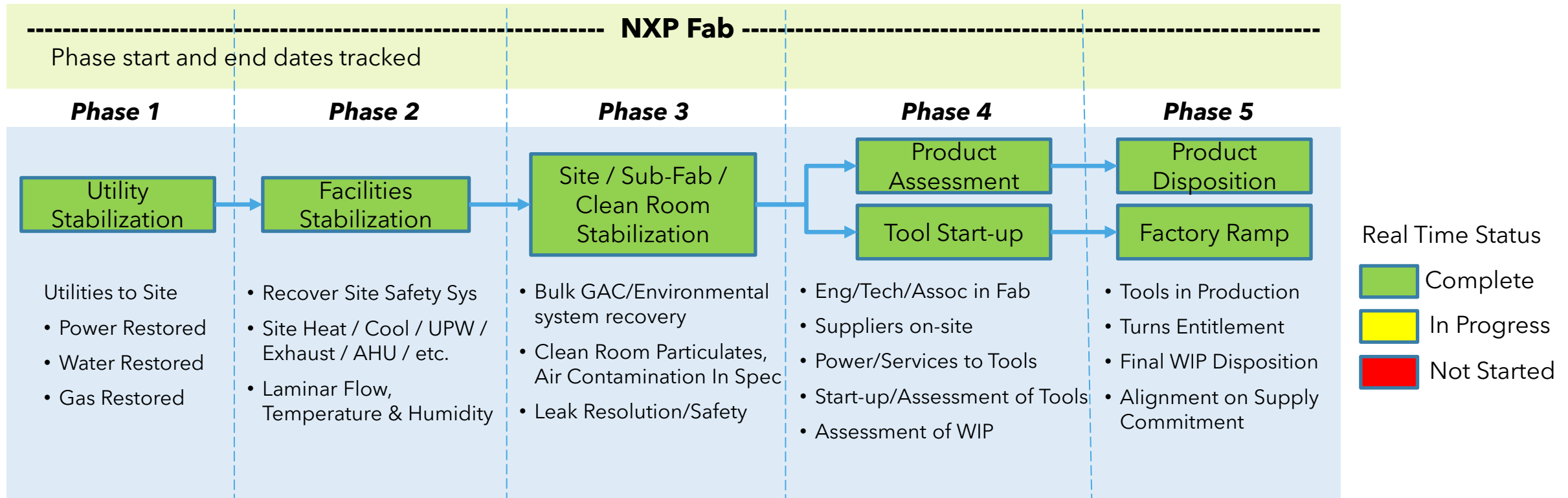
- Life safety protection & containment (first responders).
- Protect safety of personnel via evacuation plan.
- Emergency Response Team activation.

- Conduct damage evaluation on buildings and/or material.
- Compile detailed lists of affected factories/sites, resources, products and customers.
- Initial communications.

- Production recovery or relocation.
- Facility recovery.
- Compile initial finished goods supply plan and initial customer supply plans based on allocation guidelines.
- Activate back-up plan for critical production process or service.
- Additional communications.

RECOVERY FROM A FACTORY DOWN SITUATION

- In the unlikely event of a factory down situation, NXP utilizes a five phased recovery process.
- Each phase is closely monitored for estimated and actual start and end dates.
- Daily briefings / updates held with working and executive teams to expedite each phase and optimize recovery time.
- The overall recovery period will vary with the degree of utilities and systems impacted.



KEY ELEMENTS OF NXP'S PANDEMIC PLAN (based on guidance from WHO & CDCs)

PHASE 1

- Increase monitoring, awareness of good hygiene, and stocked supplies of PPE and sanitizers.

PHASE 2

- Detailed guides for flu prevention. Self assessment screening. Added disinfection of sites.

PHASE 3

- Increase disinfection of communal spaces. Restrict non-essential travel; monitor travelers. In-house clinics staffed for more cases. Departments review staffing, distribution and logistics plans.

PHASE 4

- More rigorous disinfection schedule. Contingent workforce to maintain normal NXP operations. Work shift staggering. Encourage WFH. Mandatory screening (including thermal scanning where appropriate) prior to entering a site. Company wide travel ban. More controlled visitor restrictions.

PHASE 5

- Formal WFH options for employees that can effectively do so. Split shifts as appropriate, contingent plans incorporate potential factory line interruptions, area/building quarantine. Alternate supply and/or distribution systems.



Avoid large gatherings



Social distancing



Wear face mask per local guidance



Practice good hygiene



Disinfect frequently



Monitor for symptoms



Visitors prohibited at NXP sites



All business travel restricted

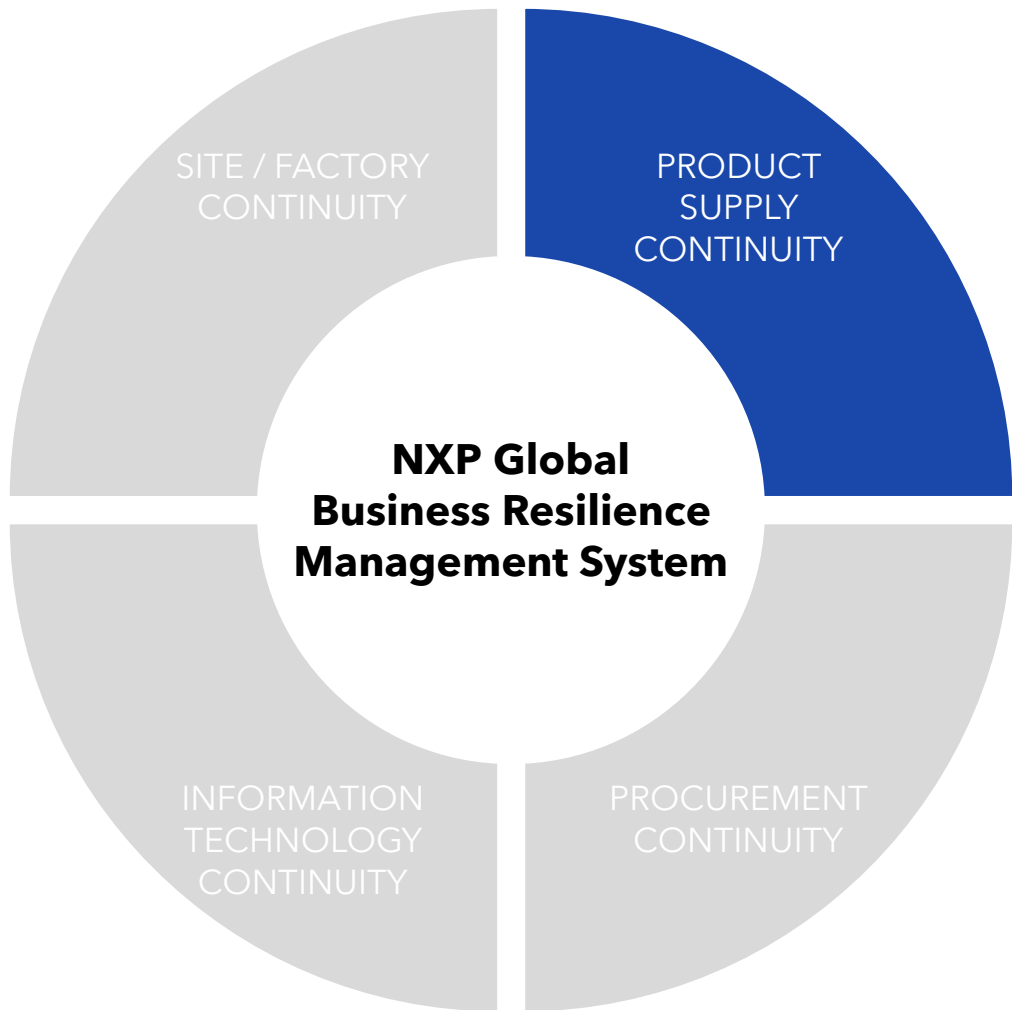


Employees quarantined under certain circumstances



Work from home if job allows

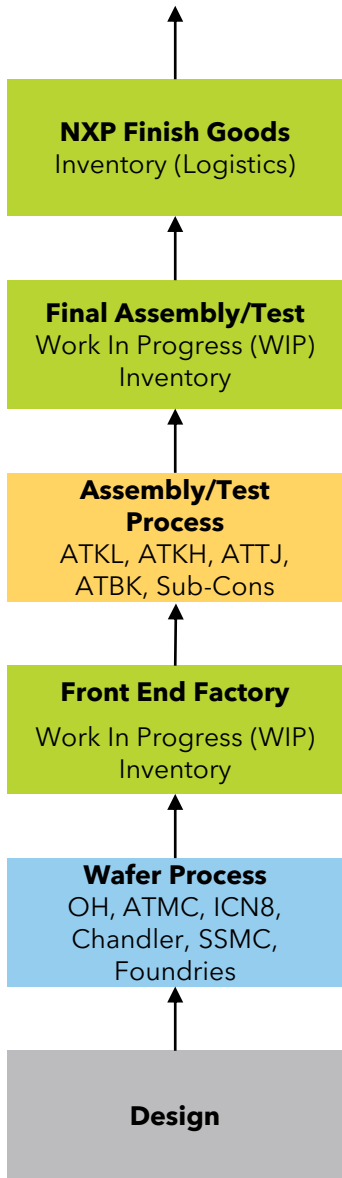
PRODUCT SUPPLY CONTINUITY



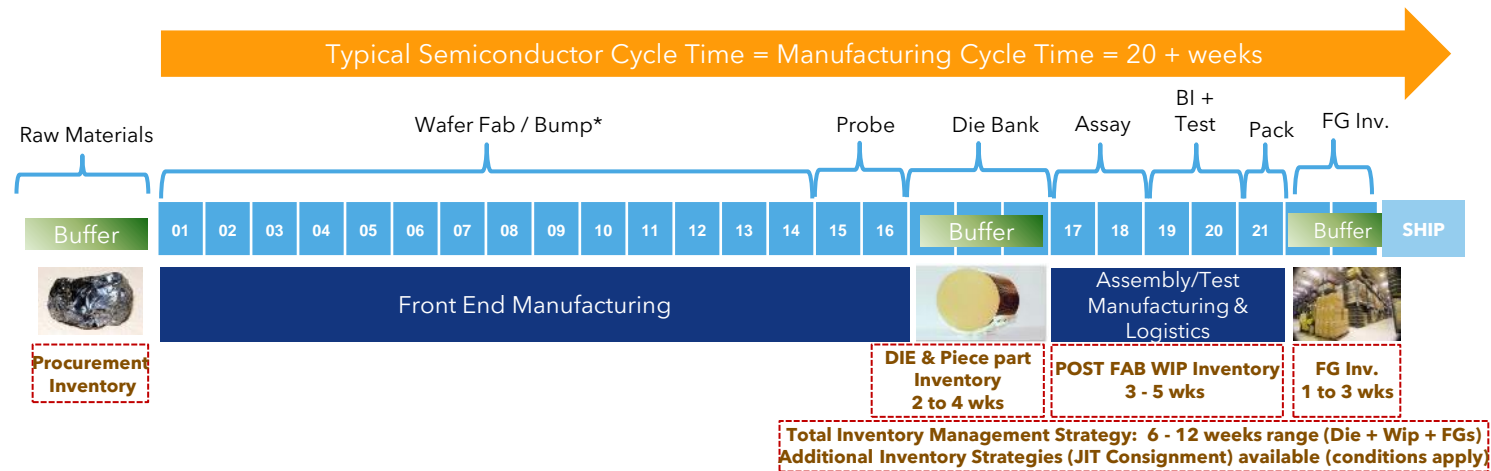
ASSURES PRODUCT DELIVERY TO CUSTOMERS

- Assessment and response team initiation for product supply.
- Information gathering hub.
- Product allocation / Decision-making hub.
- Communication protocols for internal and external.
- Die buffer and dual sourcing strategies.

NXP DIE BUFFER STRATEGY



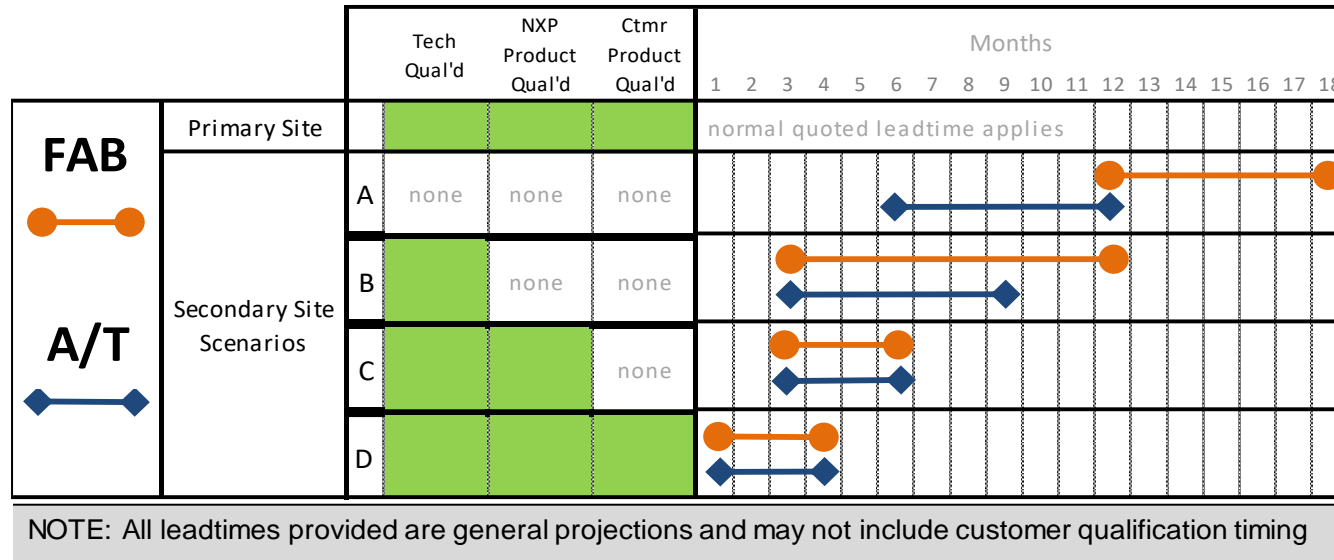
- Typical semiconductor manufacturing cycle time from wafer start to finished good test out could be 20 - 26 weeks.
- Die and finished goods buffers established based on forecasted run rates can help reduce customer order lead times to more manageable levels.
- Forecasts and order coverage (actual orders placed \geq LT) are extremely important to help keep lead times lower. Unexpected / un-forecasted increases can quickly diminish buffer levels, resulting in extended lead times.



* Certain technologies have significant layer count which could result in CT exceeding 26 weeks

High Volume Avg. Order Lead Times

NXP DUAL SOURCING STRATEGY



Scenario A: NXP has a single site qualified & in use, no existing secondary source & no plans for secondary source (FAB: 12-18 Mo, A/T: 6-12 Mo).

Scenario B: NXP has primary site qualified & has secondary site qualified on technology only (FAB: 3-12 Mo, A/T:3-9 Mo).

Scenario C: NXP has primary site qualified & has secondary site qualified on technology & product (FAB & A/T: 3-6 Mo).

Scenario D: NXP has two sources qualified with NXP & Customer Product Qualified (FAB & A/T: Normal Leadtime 3-4 Mo).

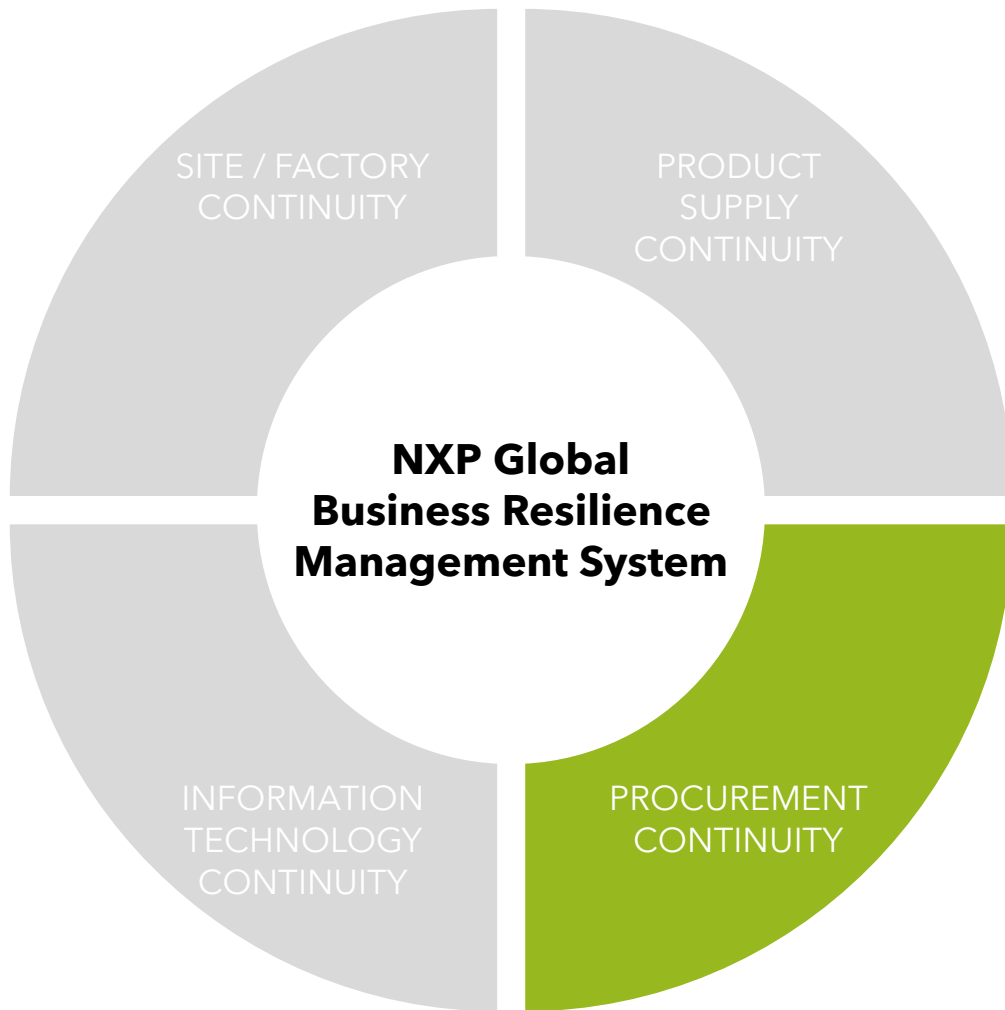
Front End Operations

NXP works to have a 2nd source for flexibility and continuity of supply. When the complexity or cost doesn't permit, NXP will use inventory strategies to support.

Back End Operations

The majority of NXP packages are dual qualified with an internal and an external source. NXP will start with one source and trigger the 2nd source once the volume warrants it. Large volume products are cross qualified and in the case of an unexpected event, additional products could be qualified.

PROCUREMENT CONTINUITY



ASSURES PROCUREMENT OF RESOURCES

- Supplier Level Risk Assessments
 - Financial risk, Geo/Environmental hazard risk quantification, Cyber Security risk.
- Supplier Management
 - Assess supplier's business continuity maturity based on supplier assessments and rate this during supplier performance management cycles.
- Supplier Crisis Management
 - Timely impact assessment following disaster event. Proactively address supply continuity and potential impact.

SUPPLY CONTINUITY RISK MANAGEMENT

NXP has set business continuity plan expectations for its key suppliers through various aspects of supplier management.

Supplier Tiering: Completed annually, material suppliers categorized as Key and Strategic are required to submit a BCP. Select suppliers in other tiers are requested to provide a BCP as needed.

Supplier Business Continuity: Supplier is asked to provide their BCP to demonstrate contingency plans for supply. Our Supplier Quality team conduct GSA audits on material suppliers, in which business continuity is a subject.

Supplier Rating System (SRS): Conducted quarterly, all material suppliers are rated on their BCP maturity by stakeholders as part of the supplier management process.

- These material suppliers are sent a self assessment on BCP maturity and trends are tracked annually.
- These material suppliers are required to submit a BCP.

Enables us to analyze suppliers' Business Continuity maturity, and to push for suppliers' continuous improvement, in order to reduce the sub-tier risk for supply disruptions.

PROCUREMENT THIRD-PARTY RISK MANAGEMENT PROGRAM (SUPPLIER SELECTION)

Supplier Due Diligence

Anti-Bribery & Anti-Corruption: Assessing the risks related to doing business with third parties, subsequently conduct the appropriate due diligence and monitor / manage third parties acting on its behalf.

Supplier Verification: Screening suppliers by checking company details to reduce the risk of onboarding fraudulent suppliers.

Supplier Sustainability

Supplier Code of Conduct: Assess supplier performance against NXP's expectations for labor, health and safety, environment, ethics and management systems.

Responsible Minerals Sourcing: Set strategy for due diligence and address responsible sourcing risks the supply chain.

PROCUREMENT THIRD-PARTY RISK MANAGEMENT PROGRAM (SUPPLIER SELECTION)

Corporate Trade Compliance

Supplier Supply Chain Security: The framework acts as a deterrent to international terrorism but also to secure revenue collections and to promote trade facilitation worldwide.

Supplier Level Risk Management

Supplier Financial Health: Monitor financial health of suppliers during the supplier selection process and on an on-going basis for selection of suppliers as an early warning for insolvency.

Supplier Viability Management: Evaluate critical supplier's financial and geographical (geopolitical and natural hazards) risk on their business with NXP to minimize risk.

Business Continuity Management: Work with suppliers and partners to prepare for unexpected events by minimizing any downstream impact to our customers.

PROCUREMENT THIRD-PARTY RISK MANAGEMENT PROGRAM (SUPPLIER SELECTION)

Part Level Risk Management

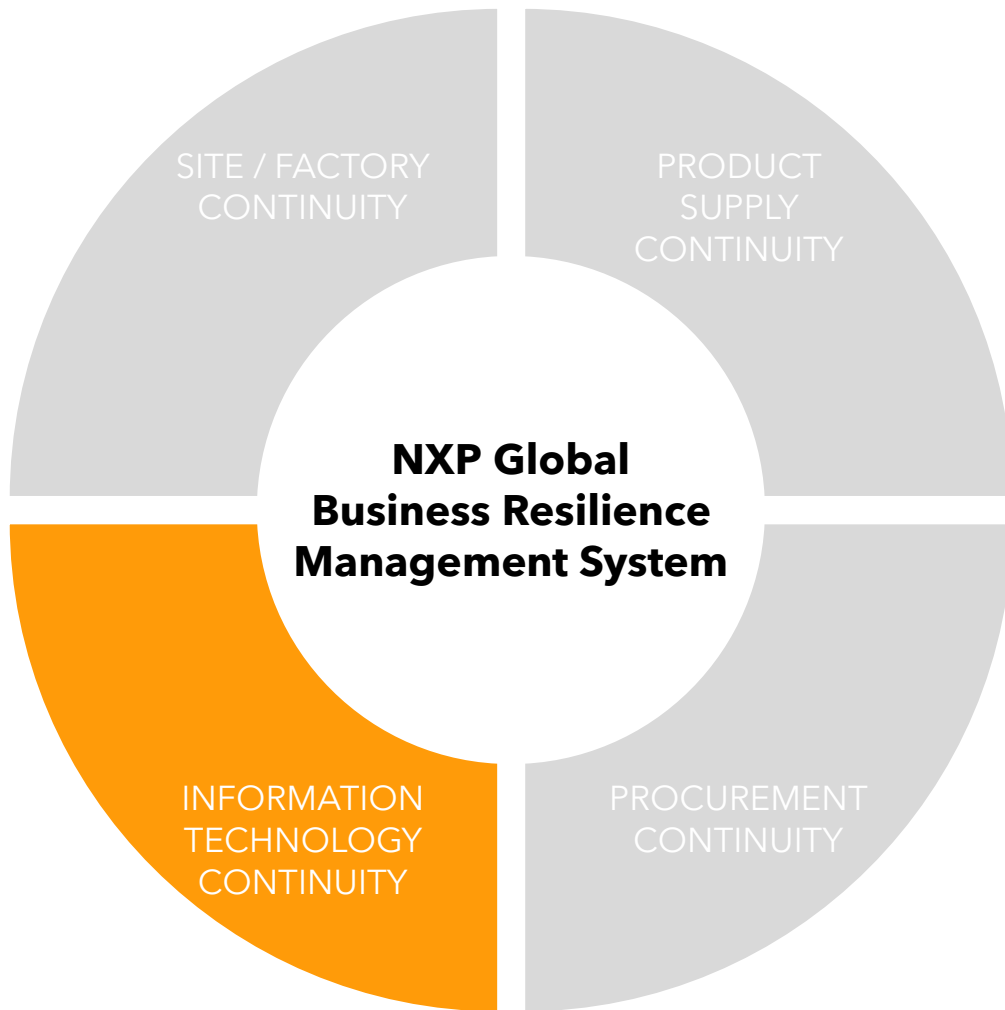
Supply Base Crisis Management: Timely impact assessment following disaster events. Proactively address supply continuity and potential impact.

Sourcing and Production Location Risk: Monitor sourcing strategy of supplier and supplier's production locations (sole/single/multi) and identify actions to mitigate or eliminate risk.

Cyber Security

Assessing, reviewing, improving and monitoring the supplier's cyber security controls and their ability to remediate vulnerabilities.

INFORMATION TECHNOLOGY CONTINUITY



ASSURES OPERATION & RESTORATION OF IT SYSTEMS

- Business impact analyses resulting in defined Recovery Point Objectives (RPOs) and Recovery Time Objectives (RTOs).
- Documented procedures for incident management and disaster recovery.
- Criticality-based backup and recovery strategy.
- Cyber security.
- Regular exercises.

IT BUSINESS CONTINUITY

PRINCIPLES

BC integrated in normal IT work – special processing avoided as much as possible.

Continuous improvement of resilience.

Improvements driven by creation of business value.

Improvements part of normal IT funding.

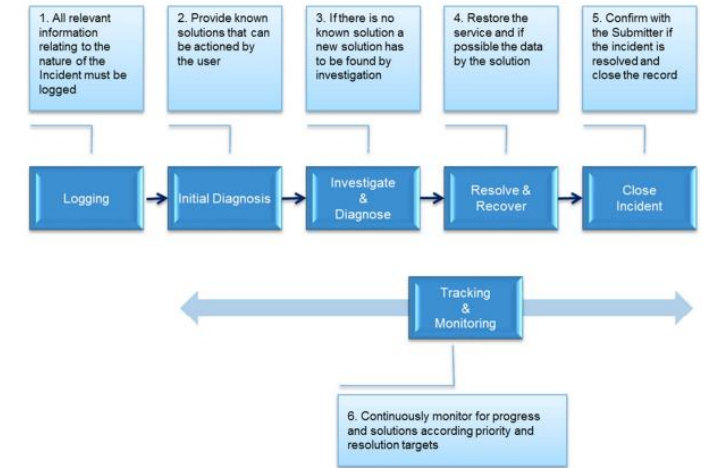
Keep-it-simple model ensuring real operational resilience.

WORK ELEMENTS

- IT issue handling is built upon **well-embedded IT Incident Management and Problem Management processes** using standardized tools and procedures for efficient logging and monitoring of the analysis, resolution and recovery of incidents and problems.
- Improvement **projects** are defined to address vulnerabilities and limitations.
- Business value / criticality and dependencies of the IT service or solution are assessed by the IT solution and business owners through a **business impact analysis** resulting in a **Recovery Point Objective (RPO)** and a **Recovery Time Objective (RTO)**.
- The RPO and RTO drive:
 - the creation of **disaster recovery plans** building upon **state-of-the-art backup solutions** to support the RPO and RTO.
 - the execution of **disaster recovery drills** targeted to validate the RPO and RTO can be met.
- Actual status and age of impact analysis, recovery solutions and drills is **monitored through a dashboard** built in the standardized IT Incident Management tool.

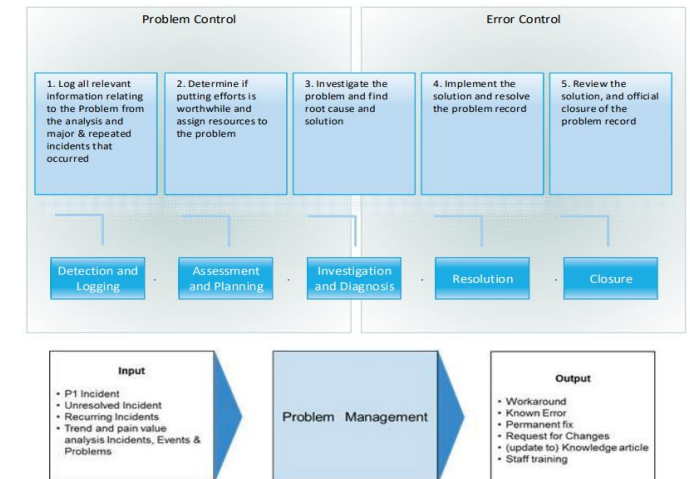
Process overview

Incident Management consist of 5 main process steps and one in parallel running monitoring process.



Process overview

Problem Management consist of two key aspects namely Problem Control and Error Control. These two key aspects are jointly broken up into 5 process steps.





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