



## Wipro Business Continuity-'Plan B'



## **INDIA: LOW RISK LOCATION ADVANTAGE**

1. Bangalore – South of India; 1500 miles from Afghanistan
2. Flight Routes

## **WIPRO: MULTI-LOCATION ADVANTAGE**

1. Development Centers across 5 cities in India, all in South & West of India
2. Multiple facilities in each city
3. Offsite Development Centers
4. Robust Communication Network

## **WIPRO SITE RISK MITIGATION**

1. Ability to commence work in alternate Wipro site or client site
2. Defined Business Continuity Process
3. Defined Backup Methodology
4. Quality processes through Veloci-Q and Channel W

## **CLIENT SITE RISK MITIGATION**

1. Incremental backup of all Work in progress
2. Weekly backup of database
3. Option of client use of port at Santa Clara end of US Fat pipe to ensure communication with Wipro India
4. Offsite development centers in Reading (UK), Phoenix and Toronto (N. America)

# India: Low Risk Advantage

# Nestled in the Silicon Valley



1. Headquartered at Bangalore, South of India
2. Approximately 1500 miles from Afghanistan
3. The same distance as between
  - a. Italy and Israel/Palestine,
  - b. Switzerland and Chechnya,
  - c. Los Angeles and Mexico City

# Multiple Flight Routes

Flying via Europe.

1. All major carriers service this route regularly.
2. Flights originate from all major European hubs into Bangalore, Mumbai, New Delhi, Chennai and Calcutta.
3. Additional routes into India via Singapore.
4. Routes exist via Mauritius or Nairobi.



# Multiple Flight Routes

Flying via the Pacific.

1. All major carriers have regular flights over the Pacific via either Singapore or Hong Kong or Tokyo.
2. Flights fly into Bangalore, Mumbai, New Delhi, Chennai, Hyderabad and Calcutta, thereby ensuring excellent direct connectivity for all our offices.



# Wipro: Multi-location Advantage

# Branching out to mitigate risks



1. Dispersed offices across 5 cities in India
2. Multiple facilities in each city
3. All locations in South/West of India, at least 1500 miles south of Afghanistan

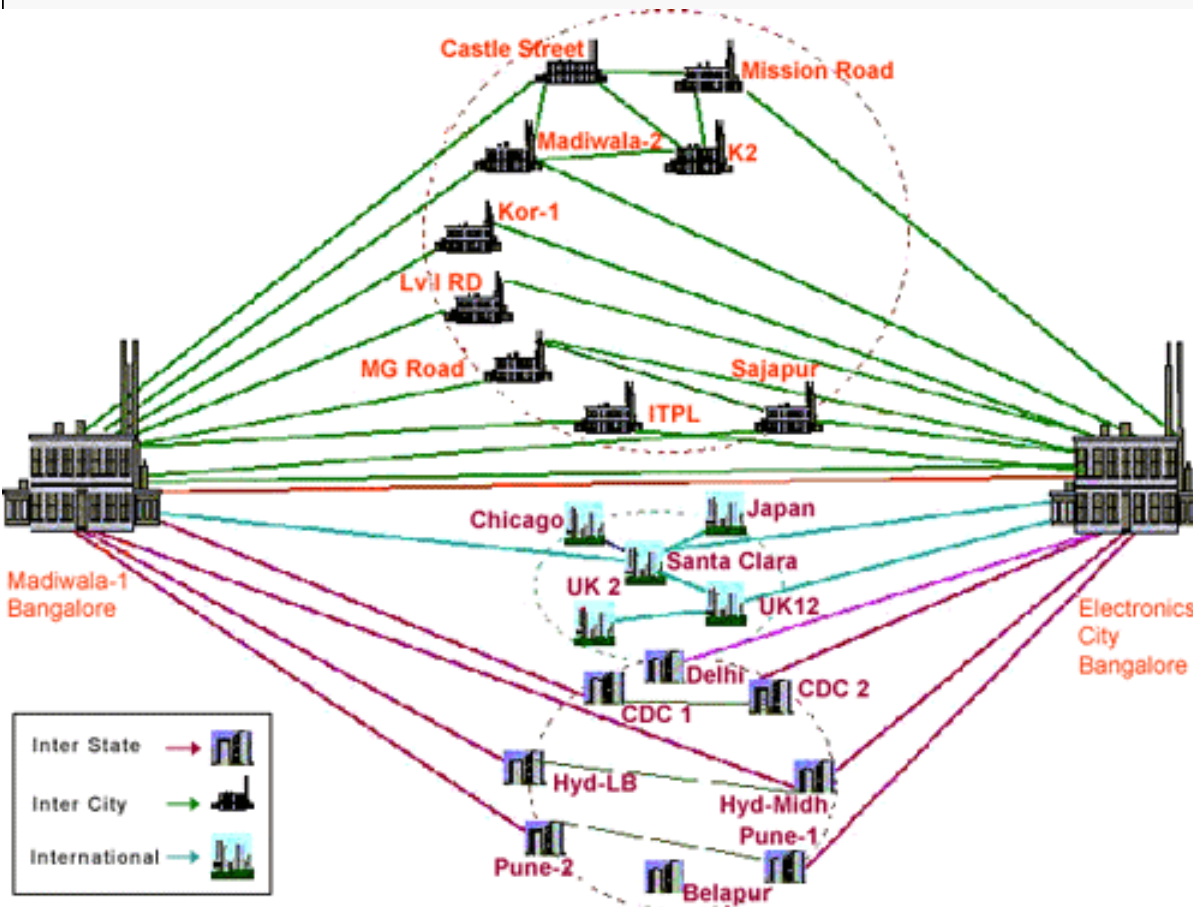
<u>Cities</u>	<u>Development Centers</u>
Bangalore:	9
Chennai:	2
Hyderabad:	1
Pune:	1
Mumbai:	1

# Precise planning for secure resources



1. Majority of locations on outskirts of city, safe from events happening in city
2. Well implemented physical security policy in all locations.
3. Independent back up power generating stations, with in-house storage of diesel fuel for up to 2 weeks in all locations.
4. All locations have fully functional, sustained 24 hour operations, with canteens, dormitories, and recreational areas.
5. All offices fully interconnected, enabling seamless inter-office transfer of information

# Robust Communication Network



Wipro Network manifests robustness through

1. Design Redundancy
2. Service Provider Redundancy
3. Mode of Communication – Land/Satellite
4. Full ISDN Dial-up as a back up
5. Managed Network.

The network has a **Star Architecture**, giving it the inherent benefit of full redundancy from multiple communication routes between points.

# Network Advantages



## Three kinds of links

### Inter Continental

1. Twin links to all international offices
2. One satellite link with MCI WorldCom
3. One terrestrial link with AT&T
4. Fat pipes with 2Mbps bandwidth

### Inter City

1. All offices in different cities connected via multiple links
2. All links terminate in two different offices in Bangalore
3. These two offices twelve miles apart
4. Combination of terrestrial, satellite and microwave

### Last Mile

1. Provided by Department of Telecommunications, Government of India

# Network Advantages



## **Wipro's Voicenet**

1. Parallel means of communication
2. Enables voice and video
3. Reliability of Wipro data network
4. Furthers productivity by integrating all Wipro offices

In-house and independent management of network

## **Offsite Centers:**

Reading – UK

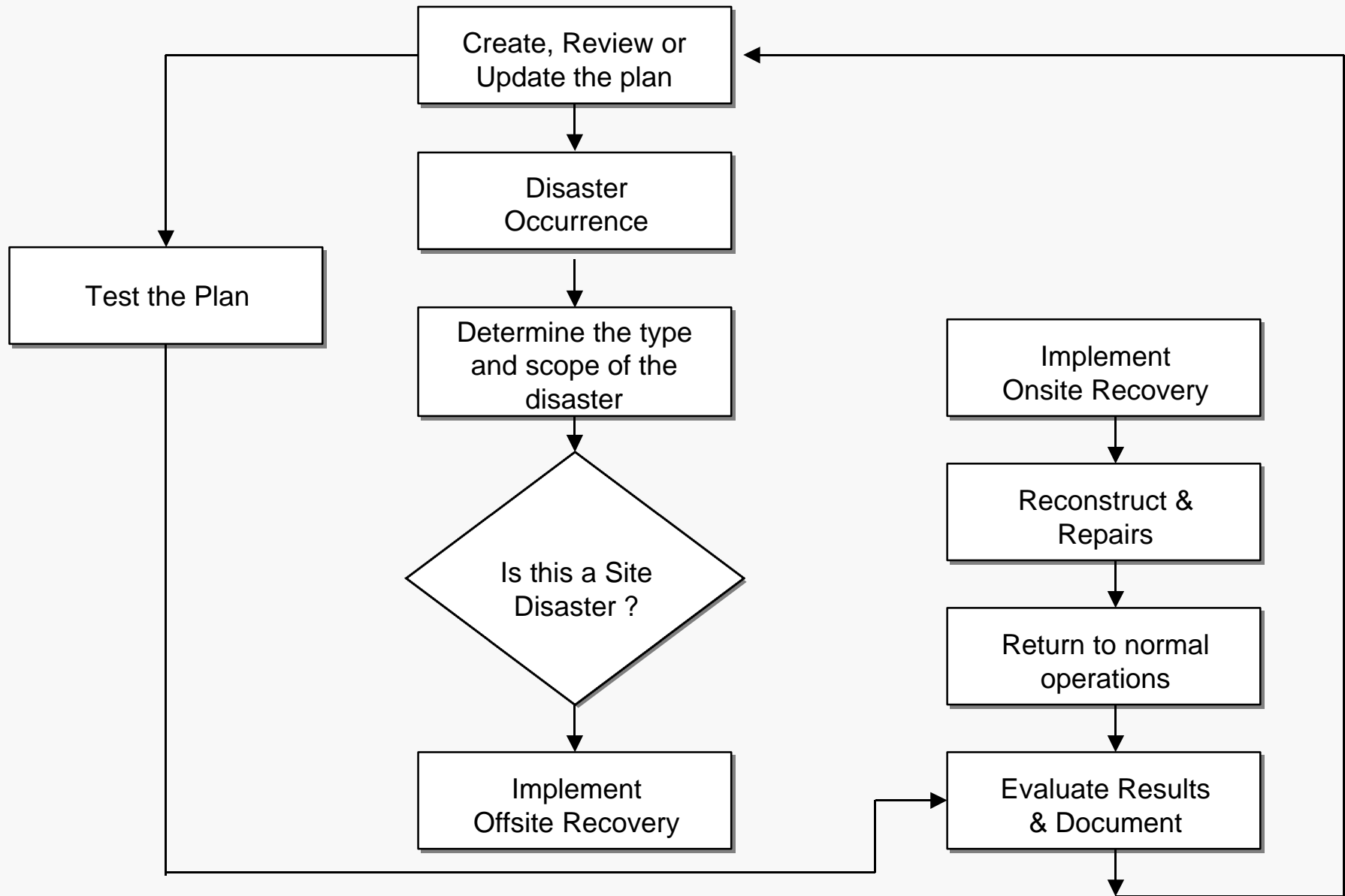
Phoenix – USA

Toronto – Canada

Local Hosting of Applications

# Wipro Site Risk Mitigation

# Wipro's Business Continuity Process



# Potential Causes of Service Interruptions



1. Hardware failure
2. Loss of data/software
3. Failure in communication link components
4. Loss of power supply
5. Loss / inaccessibility of ODC location

# Geared for any eventuality



<b>Server Hardware Failure</b>	<p>Servers to be identified as critical and non-critical servers</p> <p>Critical servers to be configured for redundancy for power supply, disk mirroring etc</p> <p>Redundancy to avoid/reduce impact of server failure</p>
<b>Loss of Data/Software</b>	<p>Project Data: Adequate backups maintained to recover loss of data</p> <p>Each project to have daily incremental backups of work-in-progress</p> <p>Weekly backup of database</p> <p>Backup media to be tested at least once in six months</p> <p>Copies of backups maintained in secure offsite location, fireproof storage cabinets</p>
<b>Failure in Communication Link</b>	<p>For all communication problems at Wipro's end:</p> <p>Equipment (router, connection hub) checked and rectified for problems detected</p> <p>Fully configured backup routers</p> <p>Alternate dedicated link facilities in case of failure in dedicated link in one location</p>
<b>Loss of power</b>	<p>Uninterrupted power supply through captive power plant</p> <p>UPS systems for ODCs for 20 minutes to avoid loss of data</p>
<b>Loss/Inaccessibility of ODC location</b>	<p>Critical work to commence in alternate Wipro site with alternate communication line</p> <p>Select team to commence work at customer premises to continue critical activities</p>

# Client Site Risk Mitigation

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Thank You



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