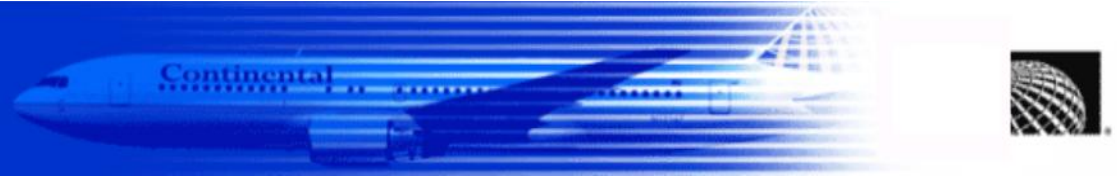


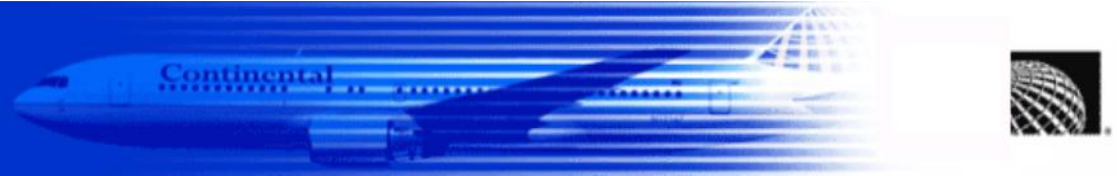
Continental Airlines 2006 Business Continuity Lessons Learned

John W. Stelly
Managing Director – Technology
March 2007



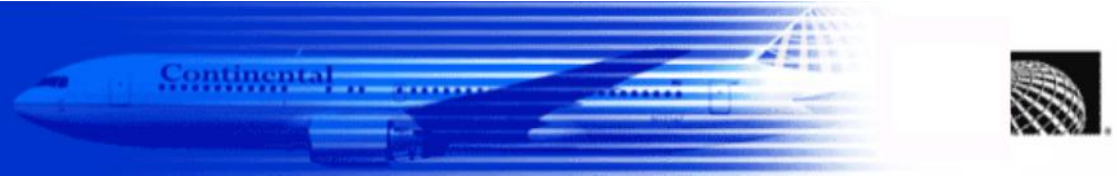
Background

- Worldwide operations
 - 24/7/365 operation
- Headquarters in downtown Houston
 - Systems Operations Control Center (SOCC)
 - www.continental.com
- Recovery Time Objective
 - Measured in minutes if not seconds!



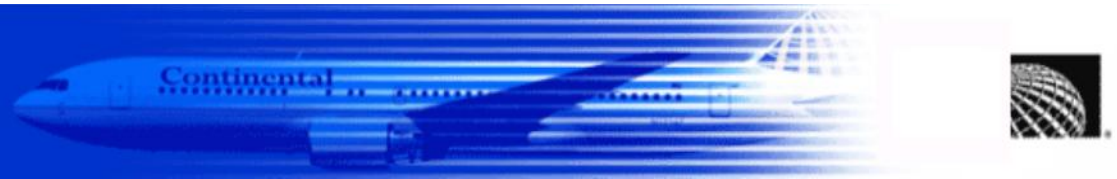
2006 Objectives

- Hurricanes Katrina and Rita
 - Motivated us to re-evaluate
- Revamp Business Continuity Plans
- Relocate SOCC and related functions
 - Secure location
 - 275 workstations and related applications
- Relocate www.continental.com
 - Secure location



Components of a Successful Plan

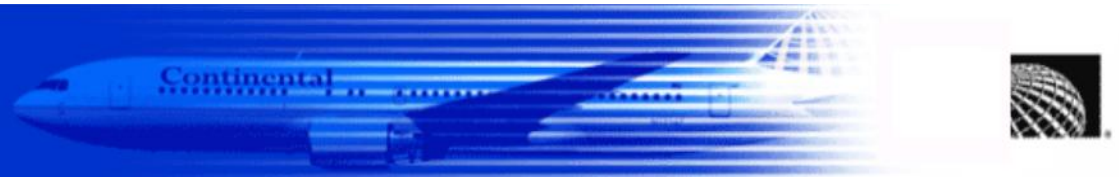
- **People**
 - Ensure the continuance of key business functions by taking care of employees
- **Process**
 - Design our business continuity plan to address the highest priority business processes
- **Technology**
 - Focus on continuity of key applications



People

- Establish a secure temporary business continuity command center at Westlin
 - Located at Montgomery, TX near Lake Conroe
 - 100 miles north of Galveston
 - 45 miles north of downtown Houston (HQS)
 - 35 miles northwest of IAH
 - 330 feet above sea level and approximately 100 feet above surrounding area
 - Safe, secure reinforced building and bunker
 - 271 business continuity command center positions filling over 12,500 sq ft
 - “Hot” Site – Fully equipped, ability to move quickly, including ability to land regional jet nearby
 - All key departments represented
 - Hotel, meals, other items available for command center employees

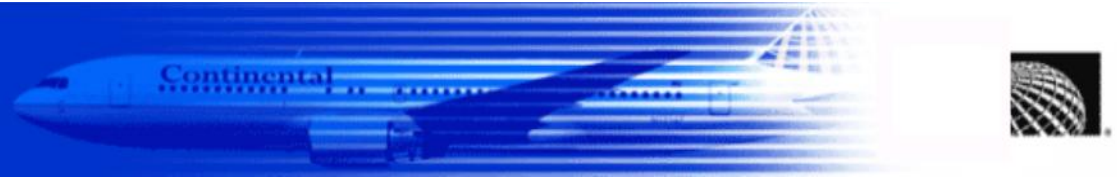
Continental Airlines



Westlin Facility

Technology Division





Westlin Facts

- Office Building
 - 4 story, concrete reinforced
 - Bullet-proof glass on windows
 - Backup generators can support building for 90 days
 - Pool and water features provide backup sprinkler protection
- The “Bunker”
 - 40,000 square feet in size
 - 5 stories underground
 - Walls are 3 feet thick, made of reinforced concrete
 - Able to withstand 25 megaton nuclear blast
 - Security is based upon biometric access
 - Originally designed to support 700 people for 90 days
 - 2 concrete reinforced Pillboxes for protection

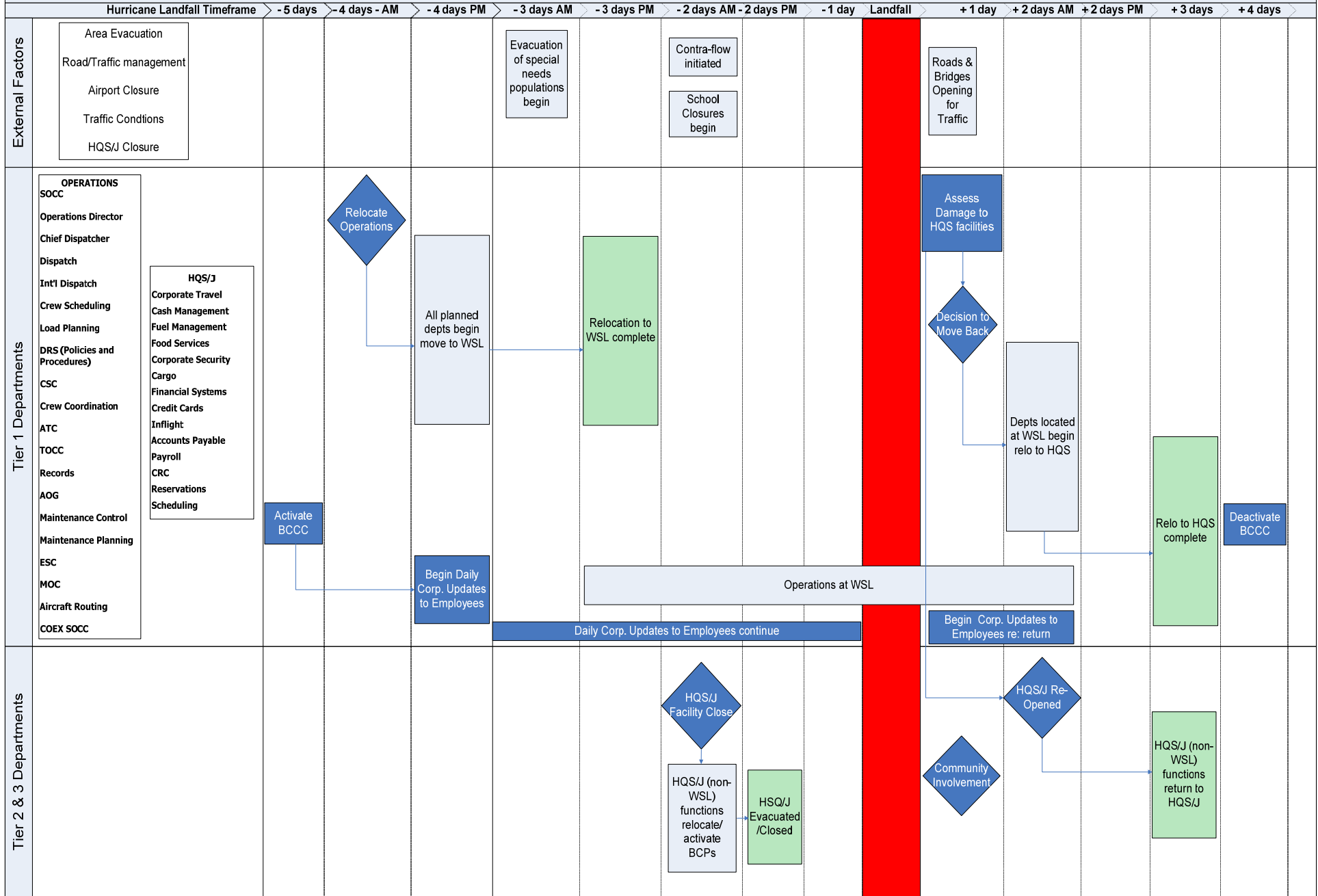


Process

- All departments are classified as:
 - Tier 1 – Recovery time < 24 hours
 - Tier 2 – Recovery time > 24 hours and < 1 week
 - Tier 3 – Recovery Time > 1 week
- Business Continuity Plans are customized by department and tier
- Executive Decision Matrix created to establish minimum timelines for executing and managing the Plan
- Business Continuity Command Structure defines the “Go Teams” and their Sr. Management contacts.

Continental Airlines Executive Decision Tree – Business Continuity

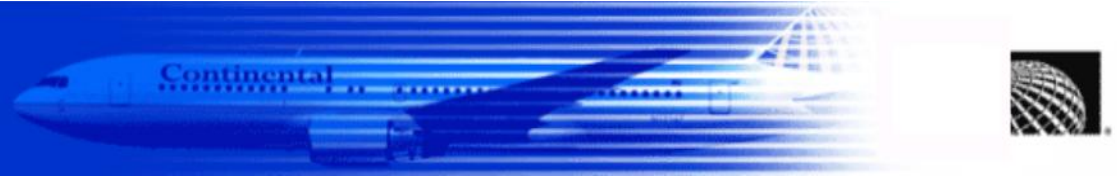
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LEGEND:

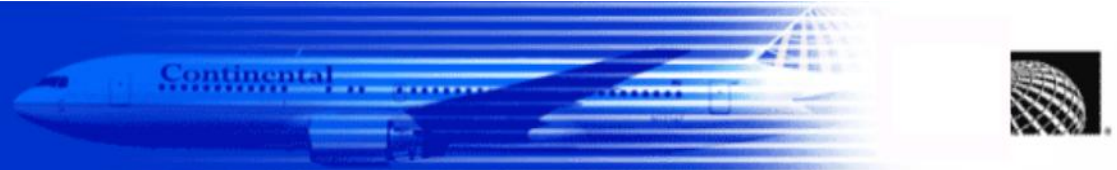
- Decision
- Division Action
- Corporate Action
- Milestone





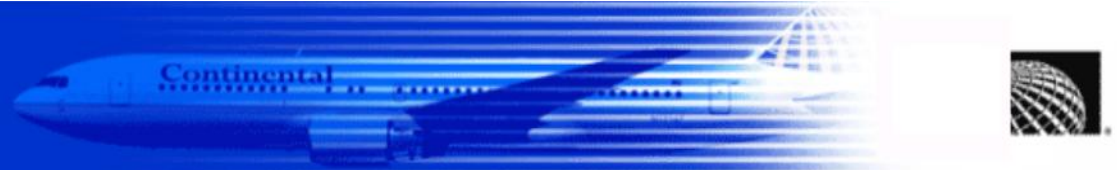
Technology

- **Technology Plan Assumptions**
 - Tier 1 applications divided into two segments
 - 1a - Flight Critical
 - 1b - Other
 - Flight Critical applications survive without headquarters
 - Water barrier on 15th floor to help protect 14th floor headquarters data center
- **Westlin Tier 1a Applications**
 - SOCC (operations center), CRC (Revenue Control), Cash Management, Fuel Management, Phone Dialing Plan and presence without voicemail
- **Charlotte EDS Data Center Tier 1a Applications**
 - Continental.com, Insidecoair, email services, mobile.coair, TOCS (maintenance control), Customer Database, Flight Status, Web Checkin, FOMS (flight operations control), Shares (departure control, reservations, inventory), SCEPTRE (maintenance records) and others



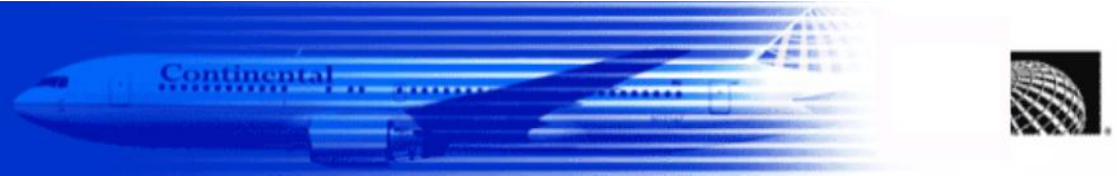
Lessons Learned Business Process

- Executive support is a must
 - This is cost, time and \$\$
- This is not a “Technology only” effort
- Establish multi-discipline Steering Committee
- Triage the organization
 - Not all departments are alike: Tier 1,2, and 3
- Planning/documentation should be compatible with company culture
- Beware of “Scope Creep”
- Employees were ready and willing
 - Real personal commitment



Lessons Learned Alternate Facility

- Location/Location/Location
- Technology is easy - People are hard!
- Plan for “people care”
- Plan for technology support
- Alternate location should have same “feel” as current facility
- Set expectations – it will NOT be 100%
- Practice, practice, practice
 - June 20th, October 3rd, February 7th, April (tentative)



Questions?

