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#### Possible Outcomes of Y2K

- Nothing: No significant impact.
- Disruption: Short-term, local, limited impact, recoverable, outside help available
- Catastrophe: Medium-term, widespread, serious impact, some permanent damage
- Armageddon: Long-term, global, irreversible



## Most Likely: Disruption to Catastrophe

**OUTCOME:** Nothing Disruption Catastrophe Armageddon

Safety

1

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**Environment** 

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Y

**Financial** 

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Y

**Production** 

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Y

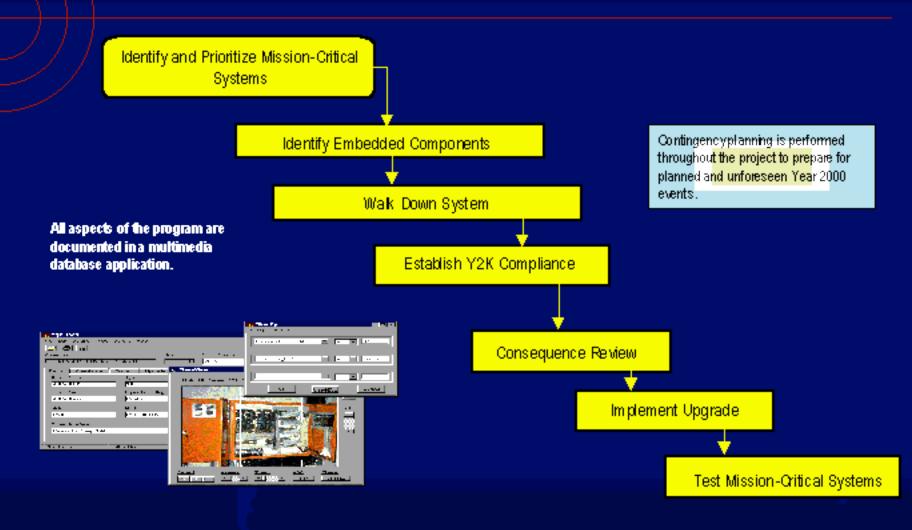
**ACTION:** 

None

Keep going, recover Contingencies, protect

Go home

#### EQE Year 2000 Embedded Systems Solution



Phase I - Risk-Based Assessment Phase II - Inventory and Compliance Phase III -Remediation and Testing



# Risk-Based Approach for Contingency Planning

- Answers three fundamental questions
  - 1) What can go wrong?
  - 2) What are the consequences?
  - 3) What is the likelihood?



## What Level of Preparedness is Required?

- With predictions of Y2K effects ranging between Hype and Armageddon, it is difficult to judge what level of planning is required.
- A common sense approach is to assume that Y2K should have about the same level of preparedness as a major earthquake.



### Structured Approach

- What are the consequences of a system failure?
- Has it failed before?
- How did you handle the problem?
- Is the emergency procedure documented?
- Does it require third-party suppliers?



## Past System or Supply Chain Failures

- What are the interdependencies?
  - Internal
  - External
- What are the emergency hardware requirements?
- What are the emergency staffing requirements?



# External and Internal Inputs/Outputs

- Power is the primary external input which must be present for system operation
  - Regional utility
  - Uninterruptible power/batteries
  - Standby generators



# Duration of Year 2000 Scenario

#### For guidance, look at past events:

- The 1998 San Francisco power outage lasted about 6 hours.
- The 1998 Auckland New Zealand power outages were intermittent over a three month period.
- The 1994 Northridge Earthquake resulted in power blackout and isolated outages lasting 48-72 hours.
- The 1989 Loma Prieta Earthquake resulted in power outages lasting 24-48 hours.
- The 1977 New York City blackout lasted about 24 hours.



#### **End Result**

- Understand what the real problems are
- Focus efforts on what is important
- Use resources to minimize risk
  - What to upgrade
  - What to test
- Develop Contingency Plan
- Understand the impact of thirdparty suppliers