California TECHNOLOGY AGENCY
Office of Information Security

Statewide Disaster Recovery Coordinator Meeting

March 27, 2013

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Office of Information Security

Meeting Agenda

----- Topics -----	
Opening Remarks and Introductions	10 minutes
Short Subjects: ☑ Program Updates / Reminders ☑ Policy Update ☑ Emergency Function 18, Cyber Security Update	40 minutes
Interactive Session: **Recovery Point Objectives (RPO)** **Recovery Time Objectives (RTO)**	50 minutes
Q & A and Networking	15 minutes

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Opening Remarks/Introductions

- Who is here today?
  - ISOs
  - DR Program Coordinators
  - Business Continuity Planners
  - Other
- Introduce yourself
  - Name
  - Organization
  - Role/Responsibility in organization

Program Updates/Reminders

2013 DR Coordinator Meeting Schedule:

- March 27, 2013
- June 5, 2013
- September 11, 2013
- December 4, 2013

Time: 1:00 – 3:00 PM

Employment Development Department (EDD) Auditorium
722 Capitol Mall, Sacramento CA 95814

Program Updates/Reminders

- Disaster Recovery Plan and SIMM 70B Submission Dates:
  - April 15
  - July 15
  - October 15
  - January 15
- www.cio.ca.gov/OIS/Government/schedule.asp

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Program Updates/Reminders

DR Plan Submissions

- **Please:**
  - Arrange for personal delivery to our physical address in Rancho Cordova
  - If you must use mail with signature tracking, first check with delivery service providers about the size of your package being delivery to our P.O. Box
- **Don't:**
  - Send via email or Interagency Office Mail

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Program Updates/Reminders

FOUO Reminder

- Follow FOUO Sensitive Information Handling Instructions
  - Don't:
    - Post or make available on a public website
    - Provide to the media
  - Do:
    - Limit distribution to "need to know"
    - Persons who are authorized to act on information to protect information assets

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Program Updates

- Policy and Program Improvement Committee Update
- Emergency Function 18, Cyber Security

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Interactive Session:
Recovery Point Objective (RPO)
Recovery Time Objective (RTO)

Victoria Craig, CCISO, PMP, CBCP
Statewide Disaster Recovery
Program Manager

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Presentation Agenda

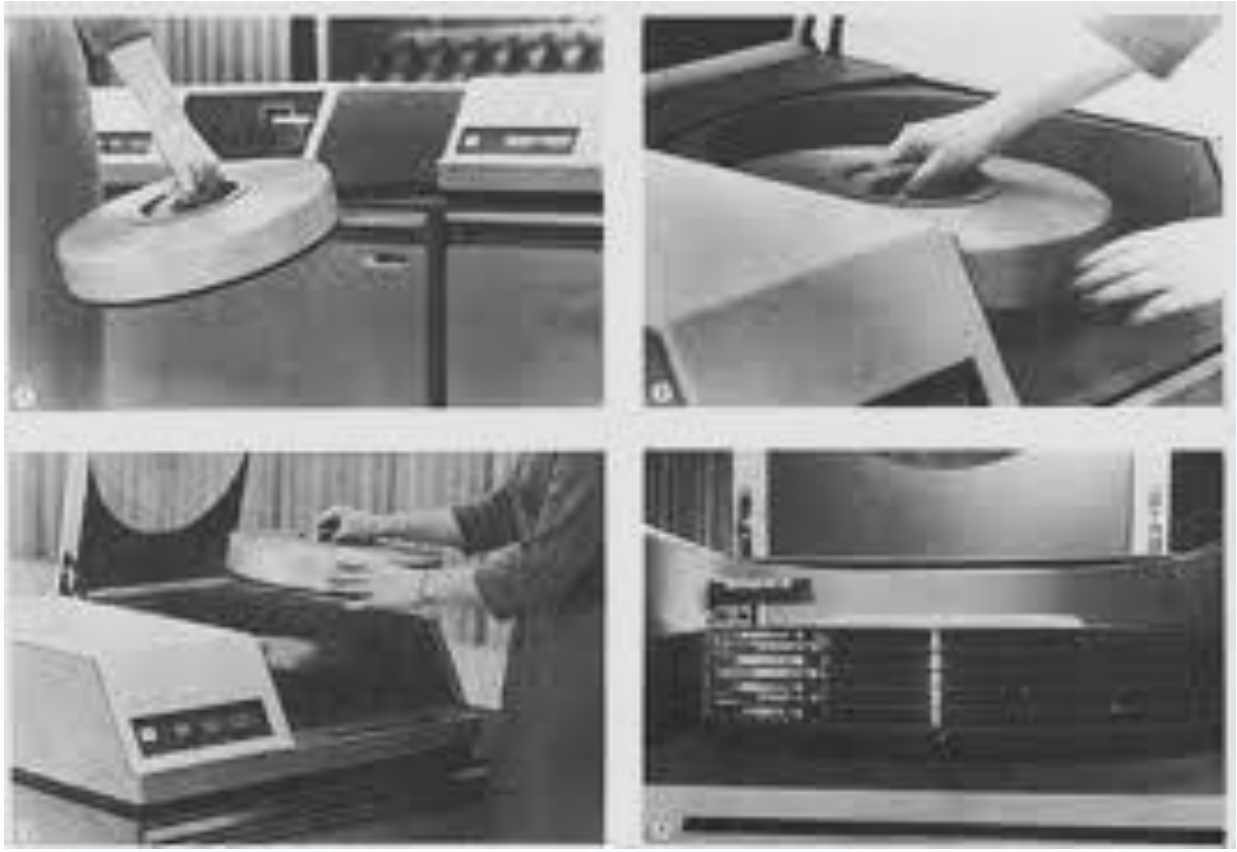
- Recovery Point Objective
- Recovery Time Objective
- Summary
- Questions

Recovery Point Objective (RPO)

- What is Recovery Point Objective (RPO)?
  - RPO Folklore

Recovery Point Objective (RPO)

- **RPO Folklore**



Recovery Point Objective (RPO)

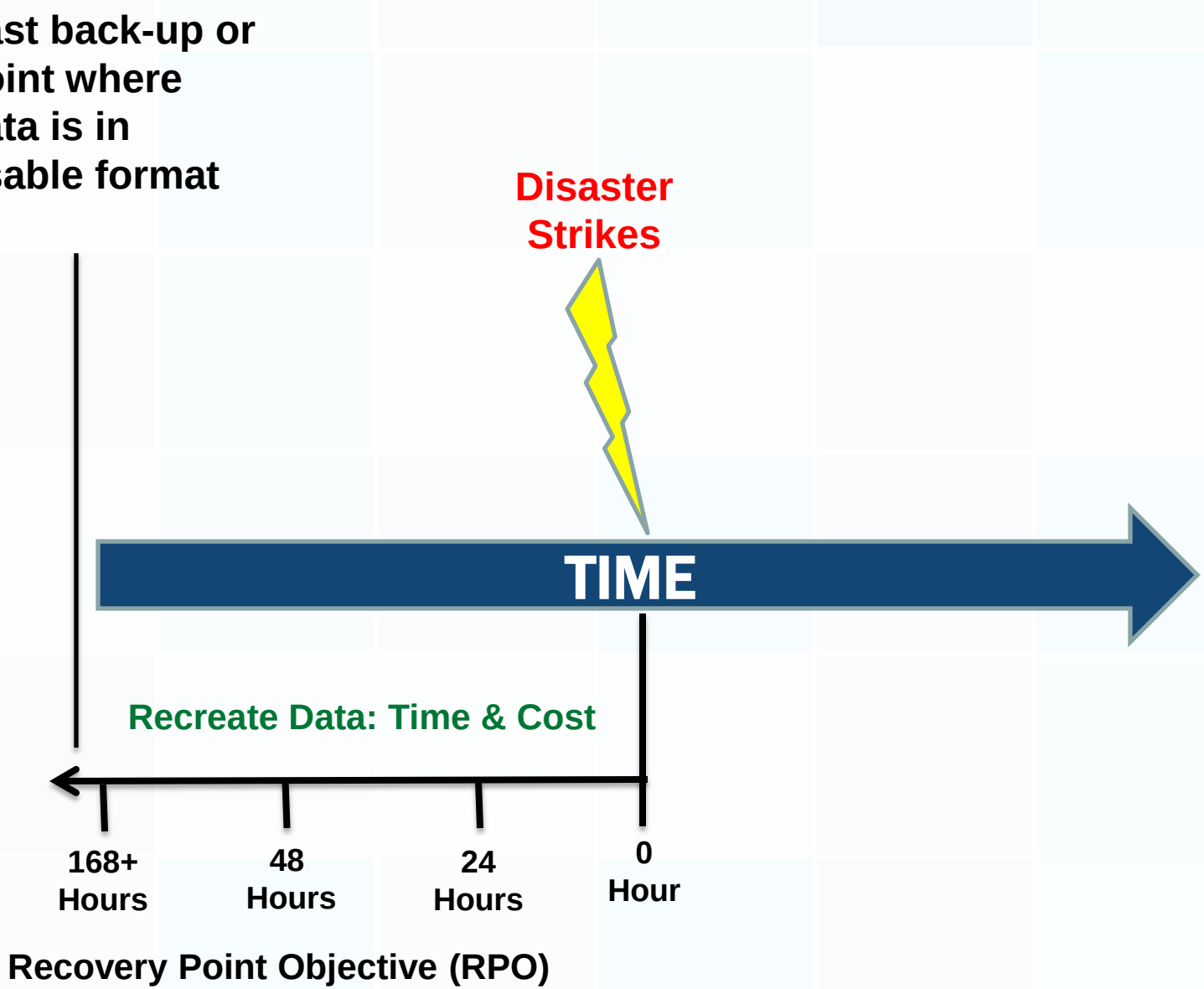
- **RPO Folklore**

Recovery Point Objective (RPO)

- **Industry definition:**
  - **The *point in time* to which data can be restored and/or systems are recovered after an outage**

Recovery Point Objective (RPO)

- RPO is used as the basis for **developing backup strategies** and determining the amount of **data that may require recreation** after systems are recovered
- **RPO** must be **established at time of disaster** as a specific *point in time* (e.g., end of previous day's processing or software version/release)
- **RPO** can be enumerated in elapsed time, but is always measured in terms of **time before a disaster**


Last back-up or point where data is in usable format
Disaster Strikes
TIME
Recreate Data: Time & Cost
168+ Hours
48 Hours
24 Hours
0 Hour
Recovery Point Objective (RPO)

Recovery Point Objective (RPO)

Consider:

- How much data can your agency lose (?)
- Can you recreate the lost data?
  - Web or customer initiated transactions
  - Limited manual processing
  - Notifications
- Number of hours to recreate lost data?
  - Transaction processing and sequencing

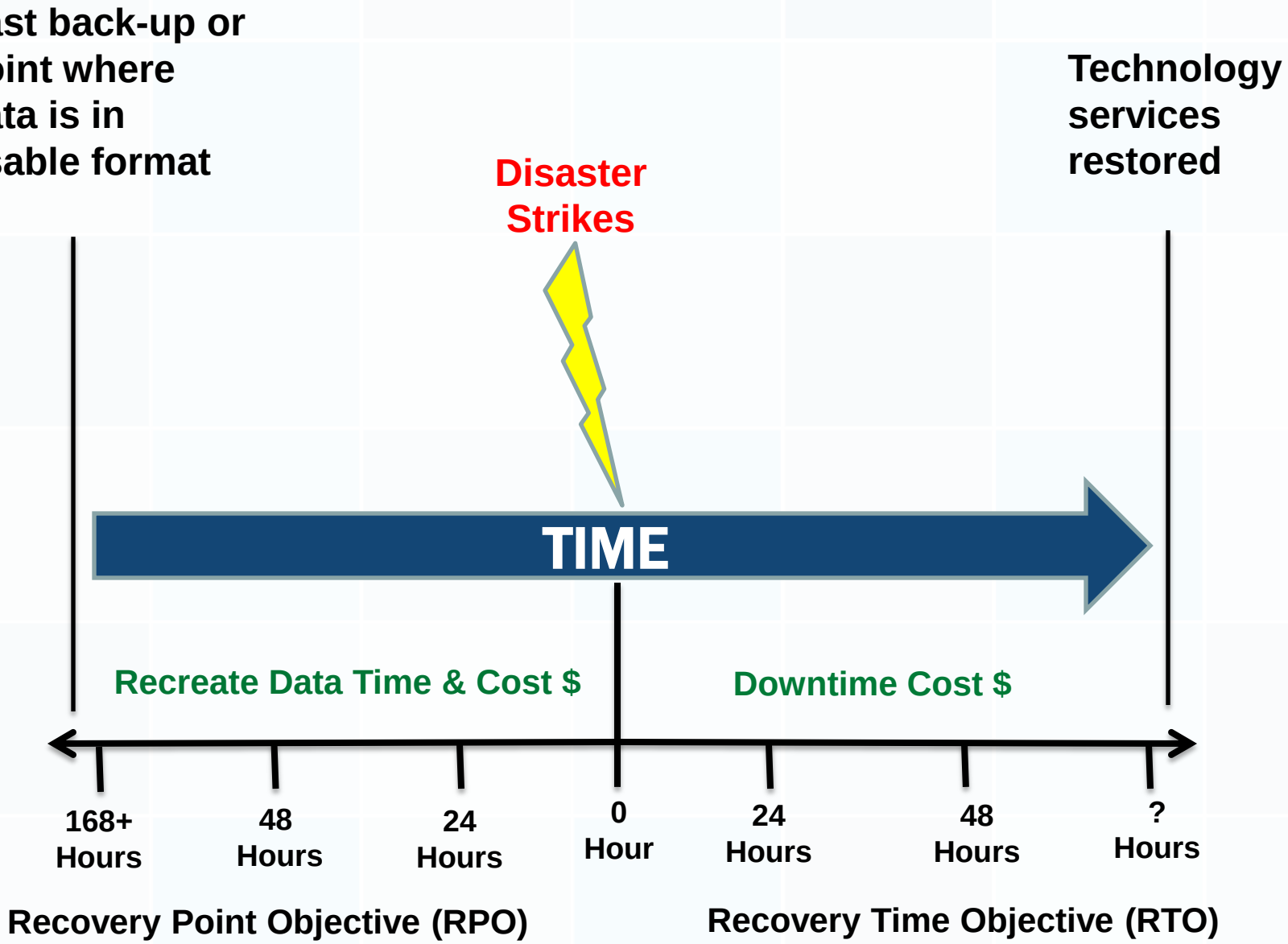
Recovery Time Objective (RTO)

What is Recovery Time Objective (RTO)?

- **Industry definition:**
  - **The *period of time within* which systems, applications, or functions *must be recovered* after an outage**
  - **RTO *may* be enumerated in ~~business time (e.g. one business day) or~~ elapsed time (e.g. 24 elapsed hours)**
  - **RTO includes the time required for: *assessment, execution and verification***

Recovery Time Objective

- **Assessment** includes the activities which before or after an event, and lead to confirmation of the execution priorities, time line and responsibilities, and the **decision regarding when to execute your recovery**
- **Execution** includes the activities related to accomplishing the **pre-planned steps required to deliver** a function, system or application in an **alternate location** to its business owner
- **Verification** includes steps taken to ensure everything is in **readiness to proceed to live operations**


Last back-up or point where data is in usable format
Disaster Strikes
Technology services restored
TIME
Recreate Data Time & Cost $
Downtime Cost $
168+ Hours
48 Hours
24 Hours
0 Hour
24 Hours
48 Hours
? Hours
Recovery Point Objective (RPO)
Recovery Time Objective (RTO)

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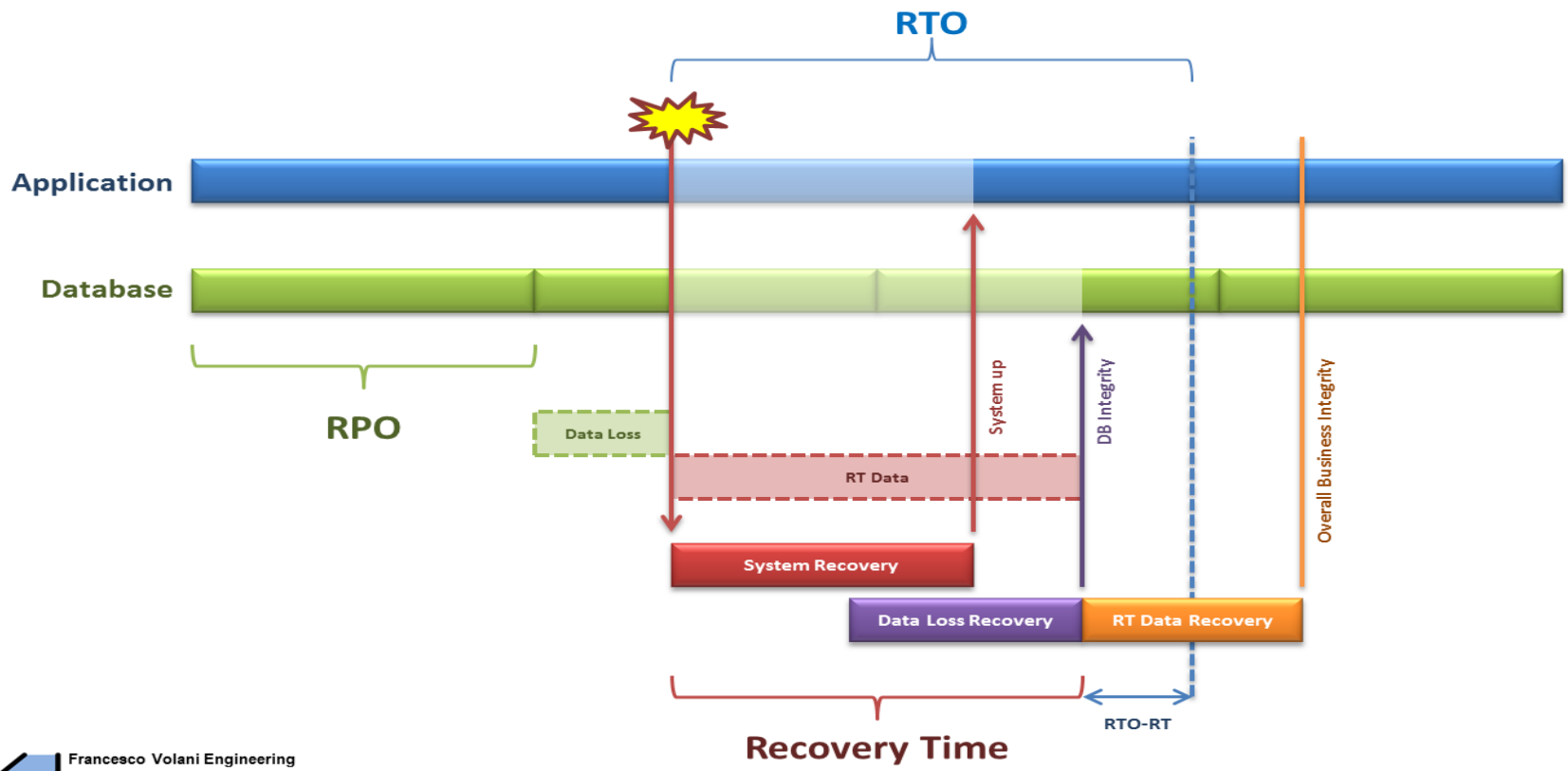
Recovery Time Objective

Consider:

- RTO are established by
  - Criticality of data / systems / function
  - Business owner needs
- Includes assessment/execution/verification
- Includes equipment replacement time
  - Procurement and delivery time
  - OS / software /customization installation
- Includes data security scrub prior to use
- Unrealistic RTO set unrealistic expectations

RPO/RTO



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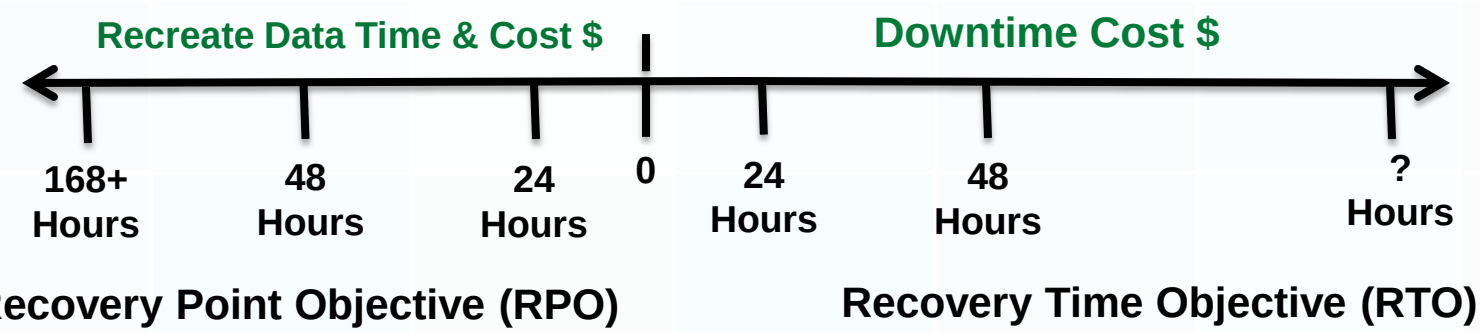
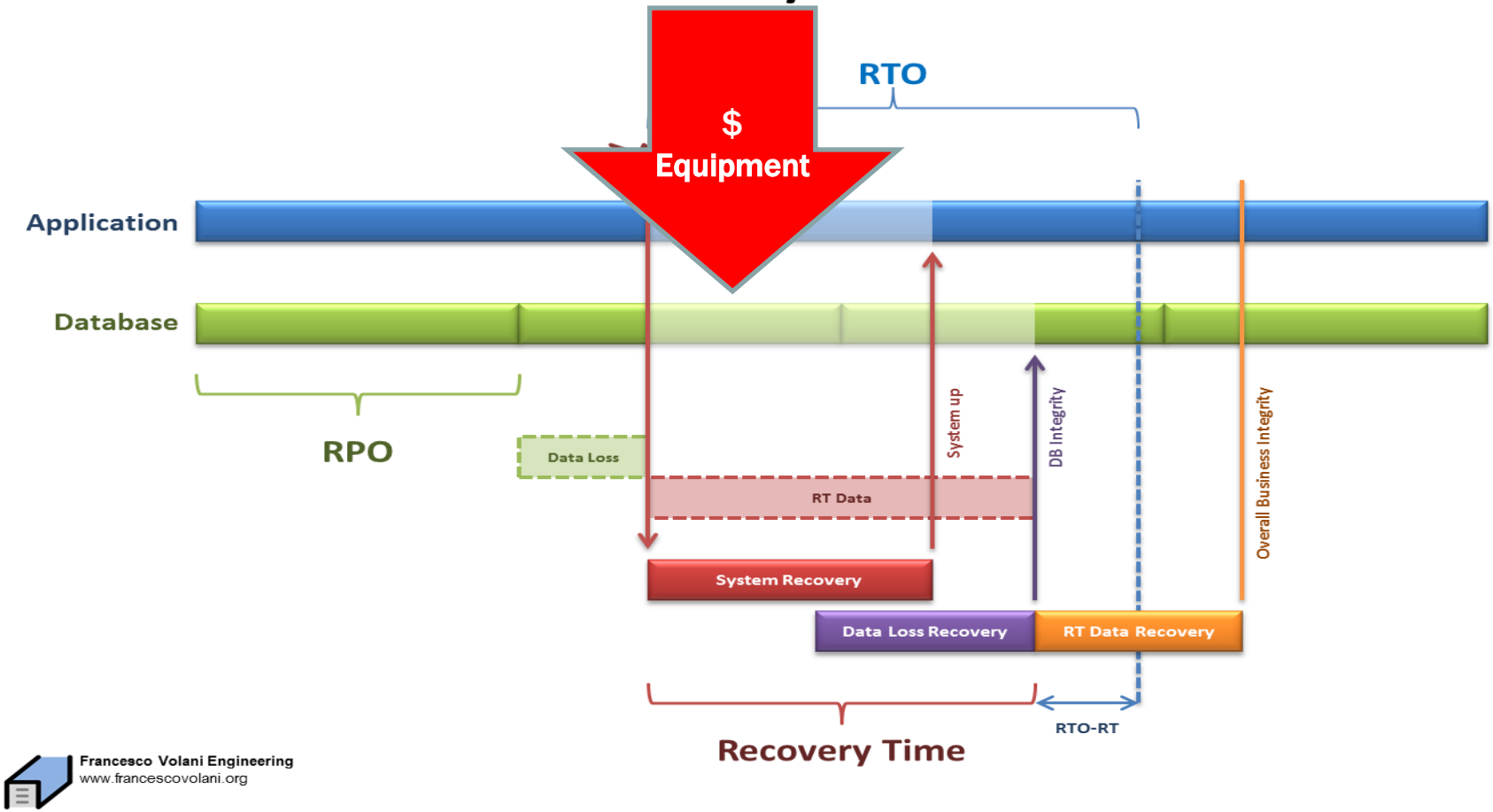


RPO/RTO


RTO
$
Equipment
Application
Database
RPO
Data Loss
System up
DB Integrity
Overall Business Integrity
RT Data
System Recovery
Data Loss Recovery
RT Data Recovery
RTO-RT
Recovery Time
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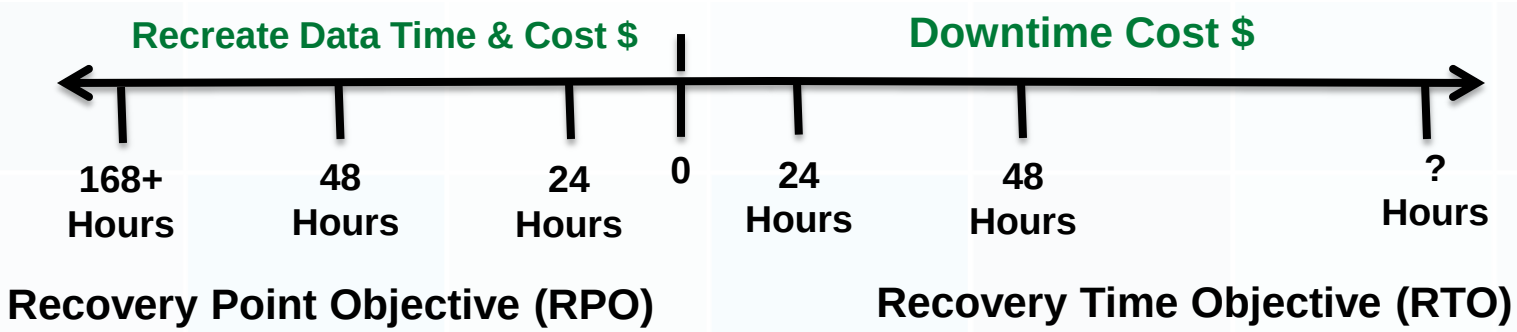
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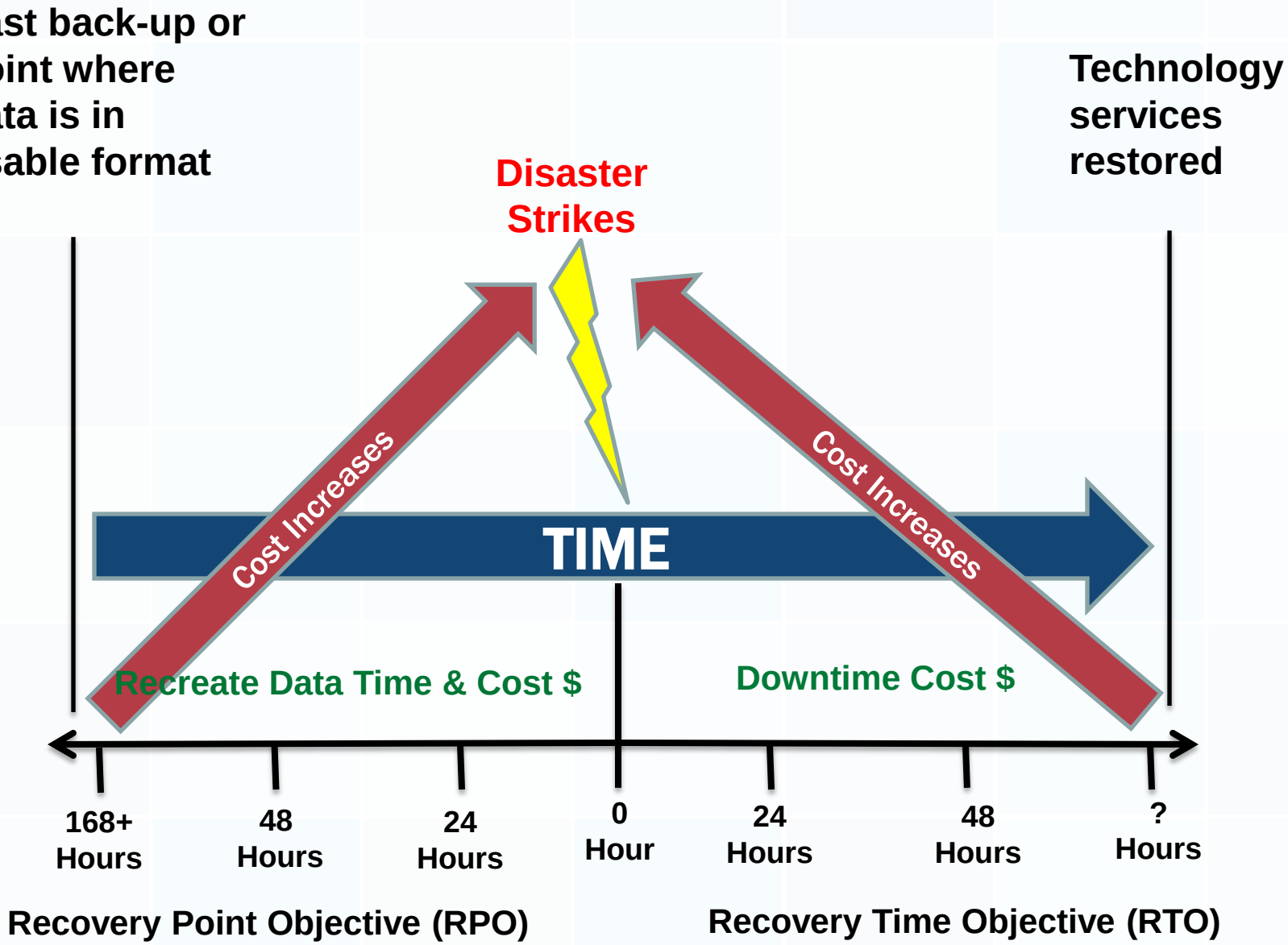
Recovery Point Objective (RPO)
Recovery Time Objective (RTO)


Last back-up or point where data is in usable format
Technology services restored
Disaster Strikes
Cost Increases
Cost Increases
TIME
Recreate Data Time & Cost $
Downtime Cost $
168+ Hours
48 Hours
24 Hours
0 Hour
24 Hours
48 Hours
? Hours
Recovery Point Objective (RPO)
Recovery Time Objective (RTO)

Summary

- Recovery Point Objective
  - Data backup strategy
- Recovery Time Objectives
  - Period of time *within* which systems, applications, or business functions must be recovered after an event
  - Based on criticality of data / systems / function
  - Business owner needs
  - Includes assessment/execution/verification
  - Set recovery expectations
  - Use hours when defining RPO and RTO
- RTO = Maximum Allowable Outage (MAO)

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Summary

- Disaster Recovery Plans
  - Improve RPO to support RTO
  - Accurately reflect RTO in DRP
- Risk
  - Identify gap
  - Elevate risks (chain-of-command)
    - Accept or fix risk

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Questions?

Closing

Thank you for your participation and continued support!