

Portland State University

PDXScholar

---

Online Northwest

Online Northwest 2012

---

Feb 10th, 3:05 PM - 3:00 PM

## Offsite Storage: Anatomy of a Data Center

Amy Maule  
*CH2M Hill*

Follow this and additional works at: <https://pdxscholar.library.pdx.edu/onlinenorthwest>

**Let us know how access to this document benefits you.**

---

Maule, Amy, "Offsite Storage: Anatomy of a Data Center" (2012). *Online Northwest*. 9.  
<https://pdxscholar.library.pdx.edu/onlinenorthwest/2012/Presentations/9>

This Lightning Talk is brought to you for free and open access. It has been accepted for inclusion in Online Northwest by an authorized administrator of PDXScholar. Please contact us if we can make this document more accessible: [pdxscholar@pdx.edu](mailto:pdxscholar@pdx.edu).

The logo for CH2MHILL, consisting of the text "CH2MHILL." in a bold, white, sans-serif font, centered on a solid blue rectangular background.

**CH2MHILL.**

## Offsite Storage

Anatomy of a Data Center

## Amy Maule

- 2012 President, **Oregon Chapter of the Special Libraries Association** (<http://oregon.sla.org/>)
- Research Analyst, CH2M HILL
  - Founded in Corvallis
  - Engineering and Architecture
  - Designs and performs consulting services for Data Center clients

# The Cloud is not a Cloud



# The Cloud is Data Centers



[perspectives.mvdirona.com/2011/04/09/OpenComputeMechanicalSystemDesign.aspx](http://perspectives.mvdirona.com/2011/04/09/OpenComputeMechanicalSystemDesign.aspx)

## Why it matters?

### Project Planning:

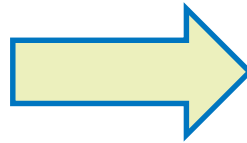
- Space requirements
- Ownership of your IP
- Vulnerability of your content

## Why it matters?

### Project Planning:

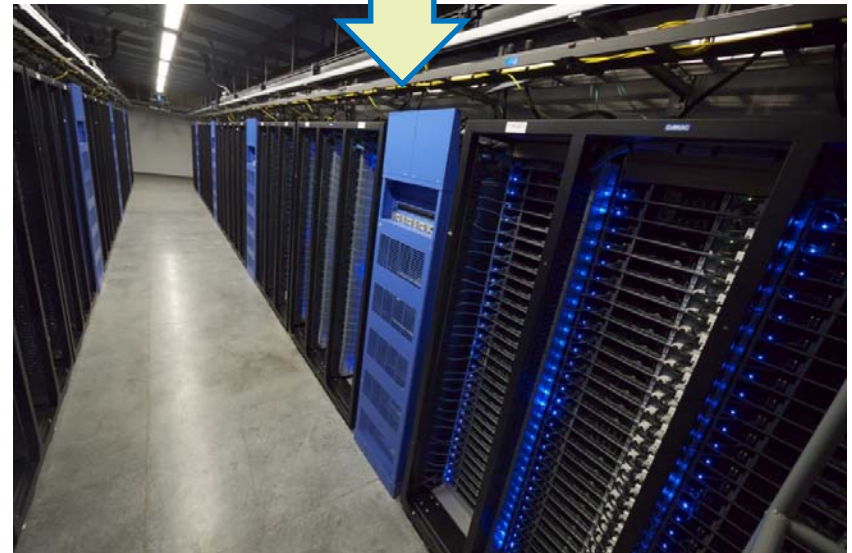
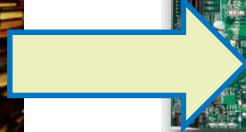
- Space requirements
- Ownership of your IP
- Vulnerability of your content

# Space Requirements

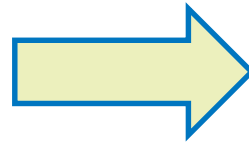




# Space Requirements



# Space Requirements



- Data Storage?
- Traffic?

# Intellectual Property

- If faculty research is stored in the “cloud,” there may be associated IP ramifications.

# Intellectual Property

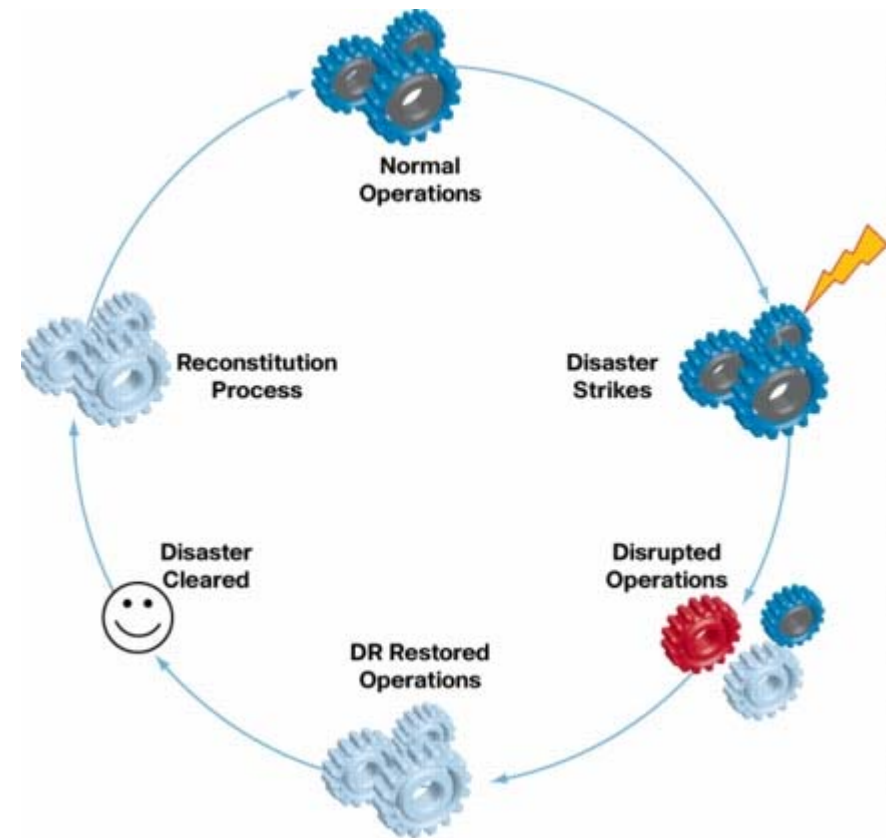
- If faculty research is stored in the “cloud,” there may be associated IP ramifications.
- If it’s hosted by an outside company, make sure you **understand their IP policies.**

# Intellectual Property

- If faculty research is stored in the “cloud,” there may be associated IP ramifications.
- If it’s hosted by an outside company, make sure you **understand their IP policies.**
- Especially outside the US!

# Vulnerability

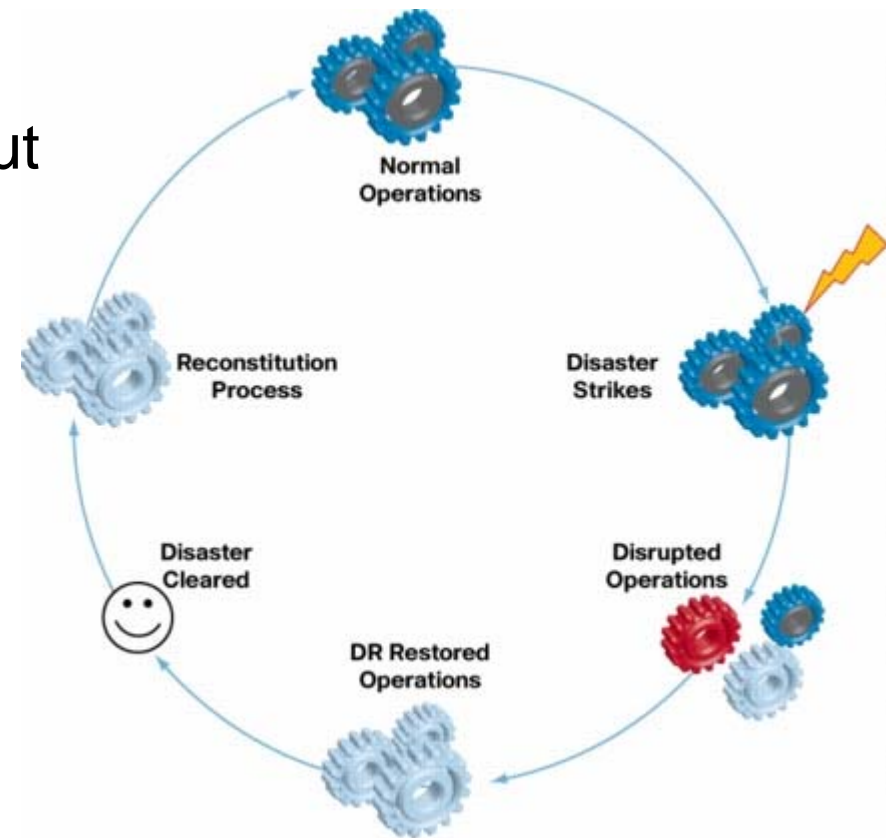
- Does your data center have a **disaster recovery plan**?
  - Temporarily inaccessible?
  - Loss of data?



[http://www.cisco.com/en/US/technologies/collateral/tk869/tk769/white\\_paper\\_c11-453495.html](http://www.cisco.com/en/US/technologies/collateral/tk869/tk769/white_paper_c11-453495.html)

# Vulnerability

- Does your data center have a **disaster recovery plan**?
- Not your **responsibility**, but could end up being your **problem**.

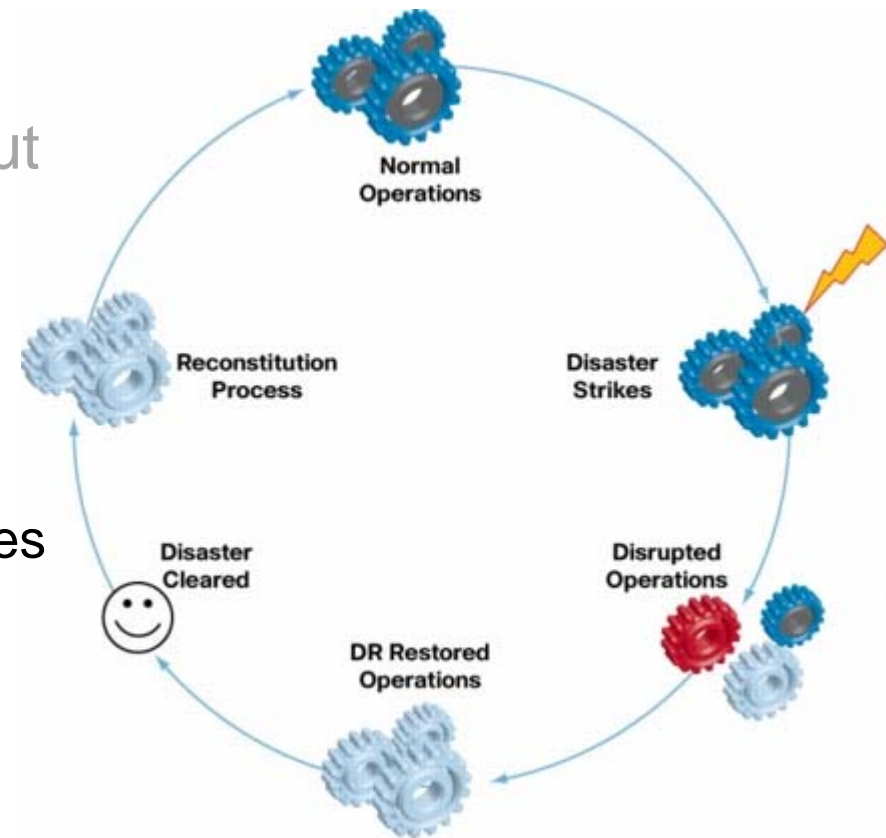


[http://www.cisco.com/en/US/technologies/collateral/tk869/tk769/white\\_paper\\_c11-453495.html](http://www.cisco.com/en/US/technologies/collateral/tk869/tk769/white_paper_c11-453495.html)



# Vulnerability

- Does your data center have a **disaster recovery plan**?
- Not your **responsibility**, but could end up being your **problem**.
- Cisco Whitepaper—  
Disaster Recovery: Best Practices

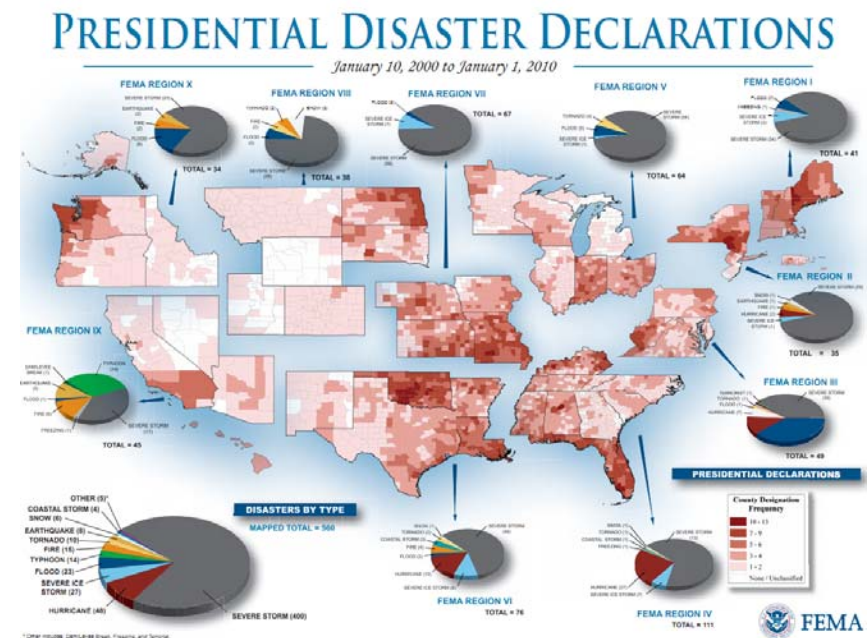


[http://www.cisco.com/en/US/technologies/collateral/tk869/tk769/white\\_paper\\_c11-453495.html](http://www.cisco.com/en/US/technologies/collateral/tk869/tk769/white_paper_c11-453495.html)



# Redundancy

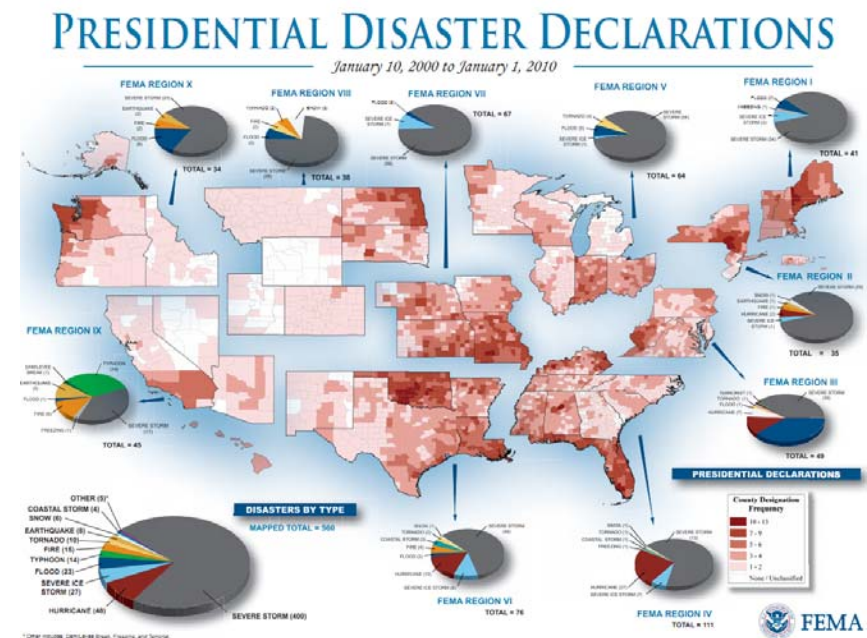
- Does your data center have **redundancy**?
  - Reduce downtime
  - Backup in case of disaster



<http://www.gismaps.fema.gov/recent.pdf>

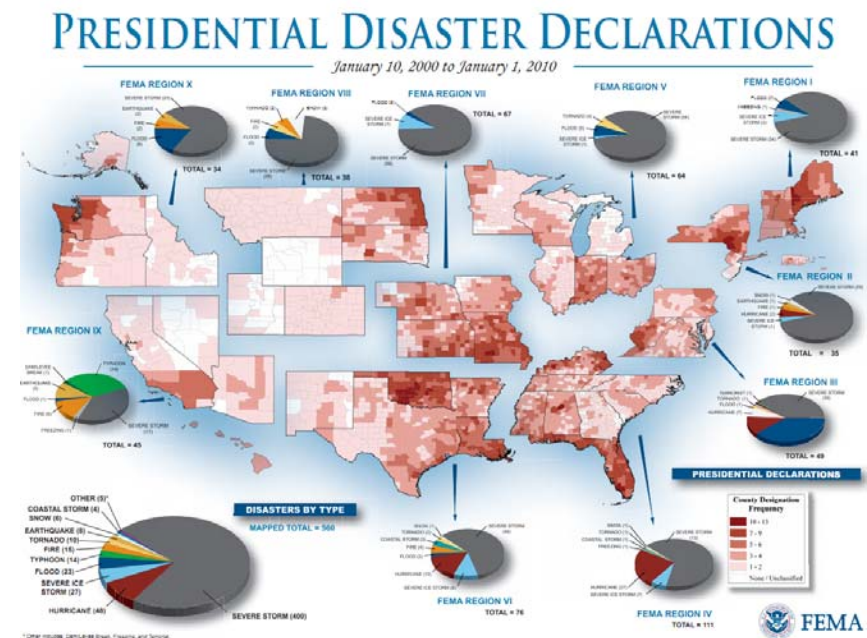
# Redundancy

- Does your data center have **redundancy**?
- How far apart?



# Redundancy

- Does your data center have **redundancy**?
- How far apart?
- Temporary downtime vs. Permanent loss?



## Energy use

“Data centers can consume up to **100 times more energy** than a standard office building.”

- [http://www1.eere.energy.gov/femp/program/dc\\_energy\\_consumption.html](http://www1.eere.energy.gov/femp/program/dc_energy_consumption.html)
- US DOE, Federal Energy Management Program. 2011. *Best Practices Guide for Energy-Efficient Data Center Design*.  
<http://www1.eere.energy.gov/femp/pdfs/eedatacenterbestpractices.pdf>

## Datacenter Videos

- Facebook, Prineville, OR:  
<http://www.youtube.com/watch?v=-DRxqHrPrFw>
- NREL, Research Support Facility, Boulder, CO:  
<http://www.youtube.com/watch?v=4ktNcjb6Bxl&feature=youtu.be>

## Thank you!

- CH2M HILL: [amy.maule@ch2m.com](mailto:amy.maule@ch2m.com)
- ORSLA: [ORSLAPresident@gmail.com](mailto:ORSLAPresident@gmail.com)