SHARE San Jose 2017

Synchronous Tape. Desirable? Achievable? Practical?

Dave Tolsma
dtolsma@luminex.com
Systems Engineering Manager, Luminex

#SHAREsjc

SHARE is an independent volunteer-run information technology association that provides education, professional networking and industry influence.

SHARE
EDUCATE • NETWORK • INFLUENCE

Copyright © 2016 by SHARE Inc. Except where otherwise noted, this work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 license.
http://creativecommons.org/licenses/by-nc-nd/3.0/

Synchronous Tape

- Why would you want it?
- What should you expect from it?
- How would you implement it?
- Is it compatible with your IT infrastructure?

Complete your session evaluations online at SHARE.org/Evaluation

Except where otherwise noted, this work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 license.
http://creativecommons.org/licenses/by-nc-nd/3.0/

Resilience vs. Recovery

- Do you have a Recovery Plan?
- Do you have a Resiliency Plan?

- Regarding ”Recovery Plan”… what’s missing?

Complete your session evaluations online at SHARE.org/Evaluation

Except where otherwise noted, this work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 license.
http://creativecommons.org/licenses/by-nc-nd/3.0/

What Constitutes a “Disaster”?

SHARE
EDUCATE • NETWORK • INFLUENCE

Expected Resilience

- Failed power supply
- Failed hard drive
- Bad cable
- Failed FICON card
- Broken switch

“It Depends”

- Power outage
- DASD subsystem failure
- Network backbone sever
- Regional natural disaster
- … ?

Complete your session evaluations online at SHARE.org/Evaluation

Except where otherwise noted, this work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 license.
http://creativecommons.org/licenses/by-nc-nd/3.0/

“It Depends”… Why?

Continuous Availability of Data within a Data Center	Continuous Availability / Disaster Recovery within a Metropolitan Region	Disaster Recovery at Extended Distance	Continuous Availability Regionally and Disaster Recovery Extended Distance
Single Data Center Applications remain active Continuous access to data in the event of a storage subsystem outage	Multi-site workloads can withstand site and/or storage failures	Two Data Centers Rapid System Disaster Recover with “seconds” of Data Loss Disaster recovery for out of region interruptions	Three Data Centers High availability for site disasters Disaster recovery for regional disasters

What about virtual tape?

			
RPO=0 & RTO=0	**A/S RPO=0 & RTO<1 hr or A/A RPO=0 & RTO mins**	**RPO secs & RTO<1 hr**	**A/S RPO=0 & RTO<1 hr or A/A RPO=0 & RTO mins and RPO secs & RTO <1 hr**

Complete your session evaluations online at SHARE.org/Evaluation

Except where otherwise noted, this work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 license.
http://creativecommons.org/licenses/by-nc-nd/3.0/

What About Virtual Tape?

- You've invested in resiliency at some level, however…
- In order to *fully realize* your resiliency investment, critical workloads that use *virtual tape* must be capable of *synchronous tape* functionality

Complete your session evaluations online at SHARE.org/Evaluation

Except where otherwise noted, this work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 license.
http://creativecommons.org/licenses/by-nc-nd/3.0/

What Should You Expect From It?

- Meet throughput performance needs
  - Now and future
- Meet your capacity scaling needs
- All equipment should actively contribute to operations
  - No “standby” equipment”
- Be complimentary to existing requirements
  - Example: Number and location of copies
- Enable flexibility for future requirements
  - Example: 3 synchronous copies
  - Example: future storage capabilities
- Co-exist with non-synchronous tape

Complete your session evaluations online at SHARE.org/Evaluation

Except where otherwise noted, this work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 license.
http://creativecommons.org/licenses/by-nc-nd/3.0/

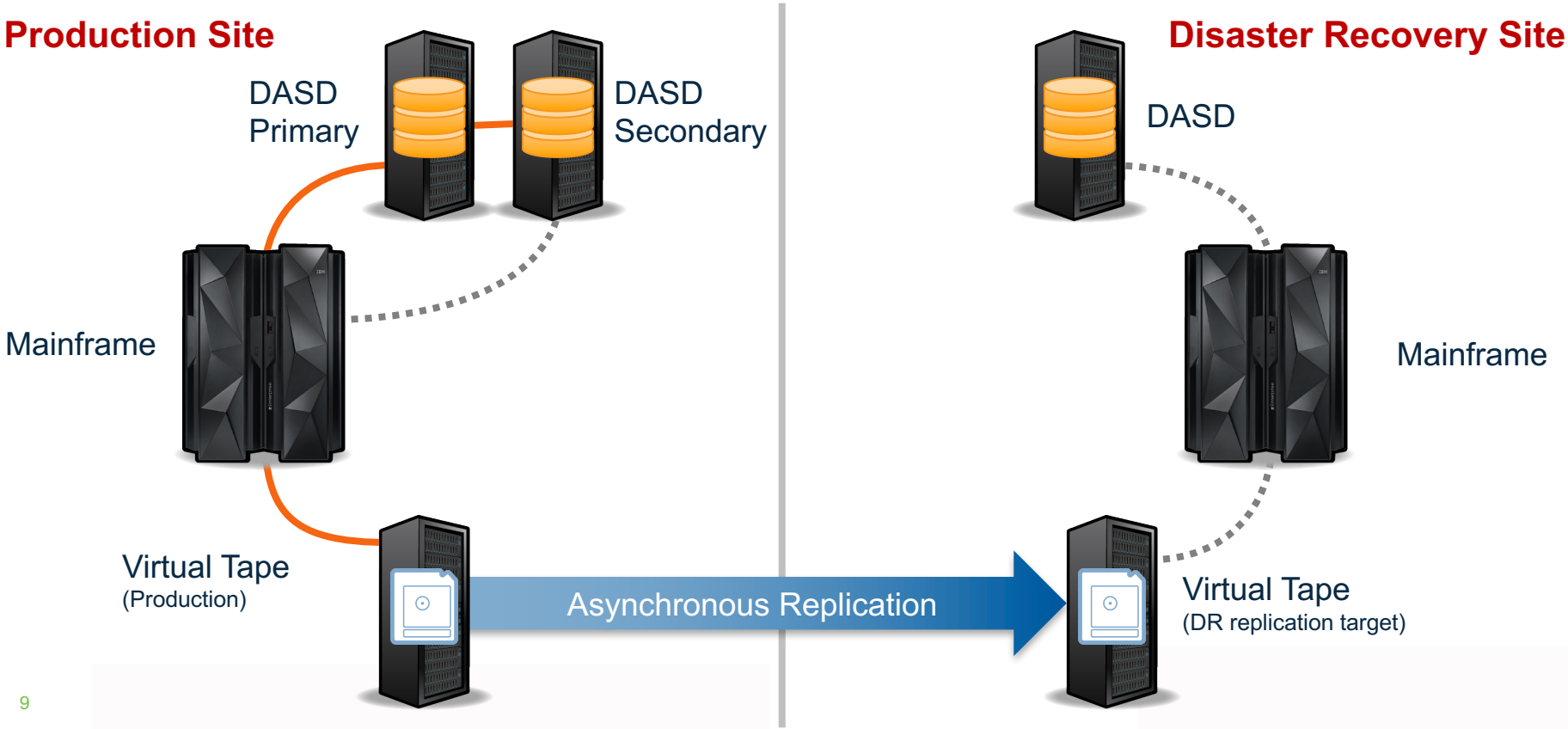
How Would You Implement It?

- Plan
  - What should be synchronous, number of copies and their location
- Size
  - Throughput and capacity
- Choose
  - Storage that meets all needs
- Deploy
  - IOGEN, define to TMC, install equipment and cable connectivity, test
- *…It needs to be no different than implementing any virtual tape*

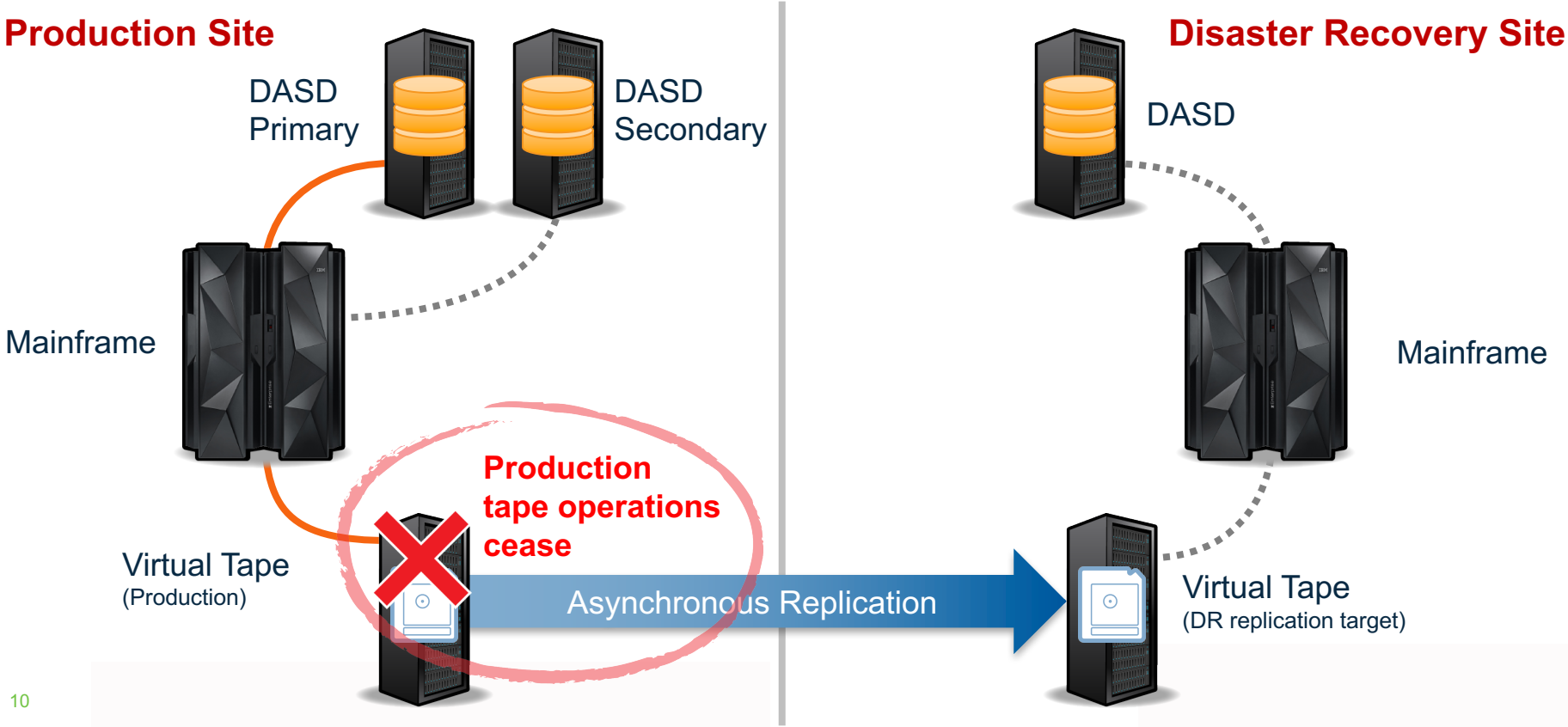
Complete your session evaluations online at SHARE.org/Evaluation

Except where otherwise noted, this work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 license.
http://creativecommons.org/licenses/by-nc-nd/3.0/

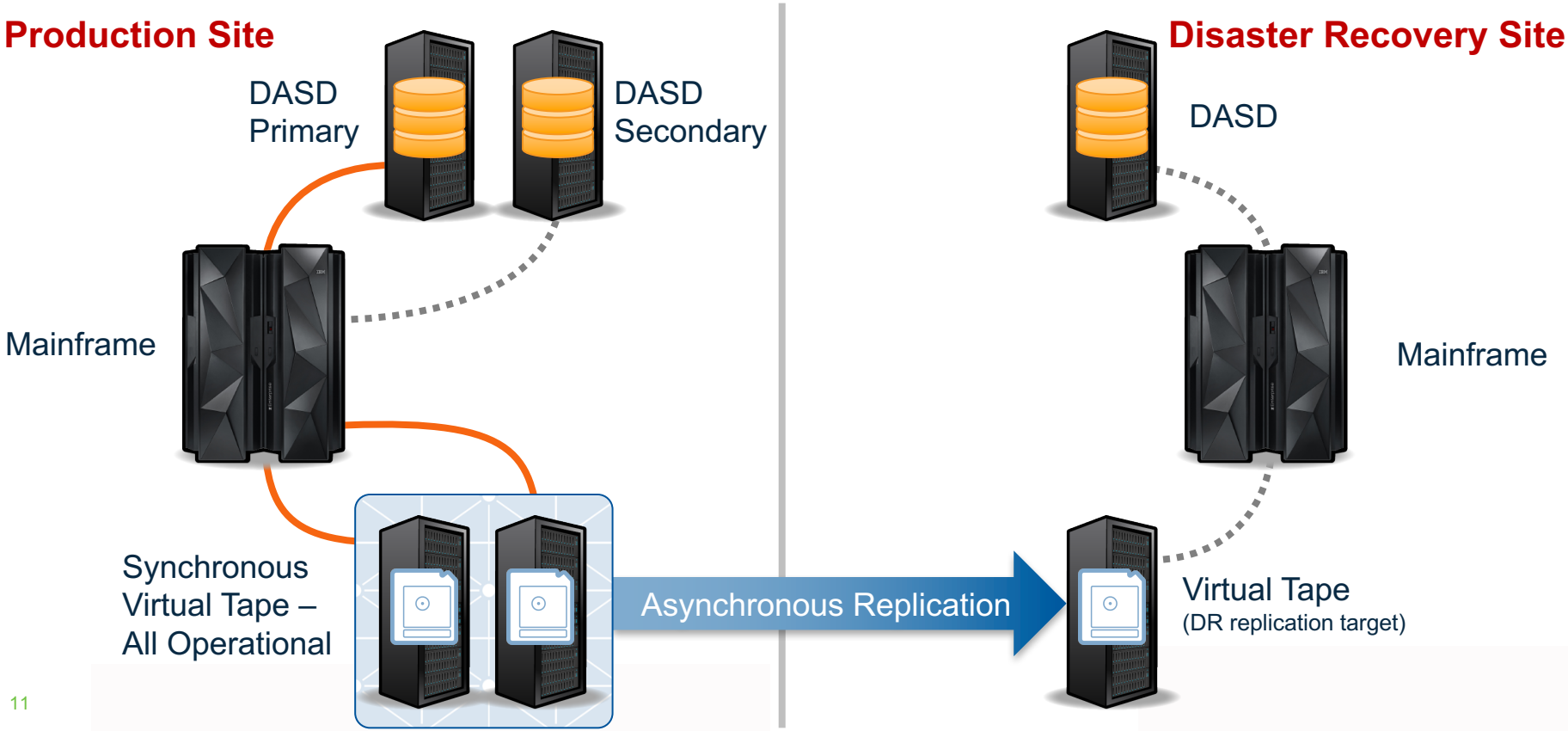
Prod/DR, GDPS/HS: Normal Operations



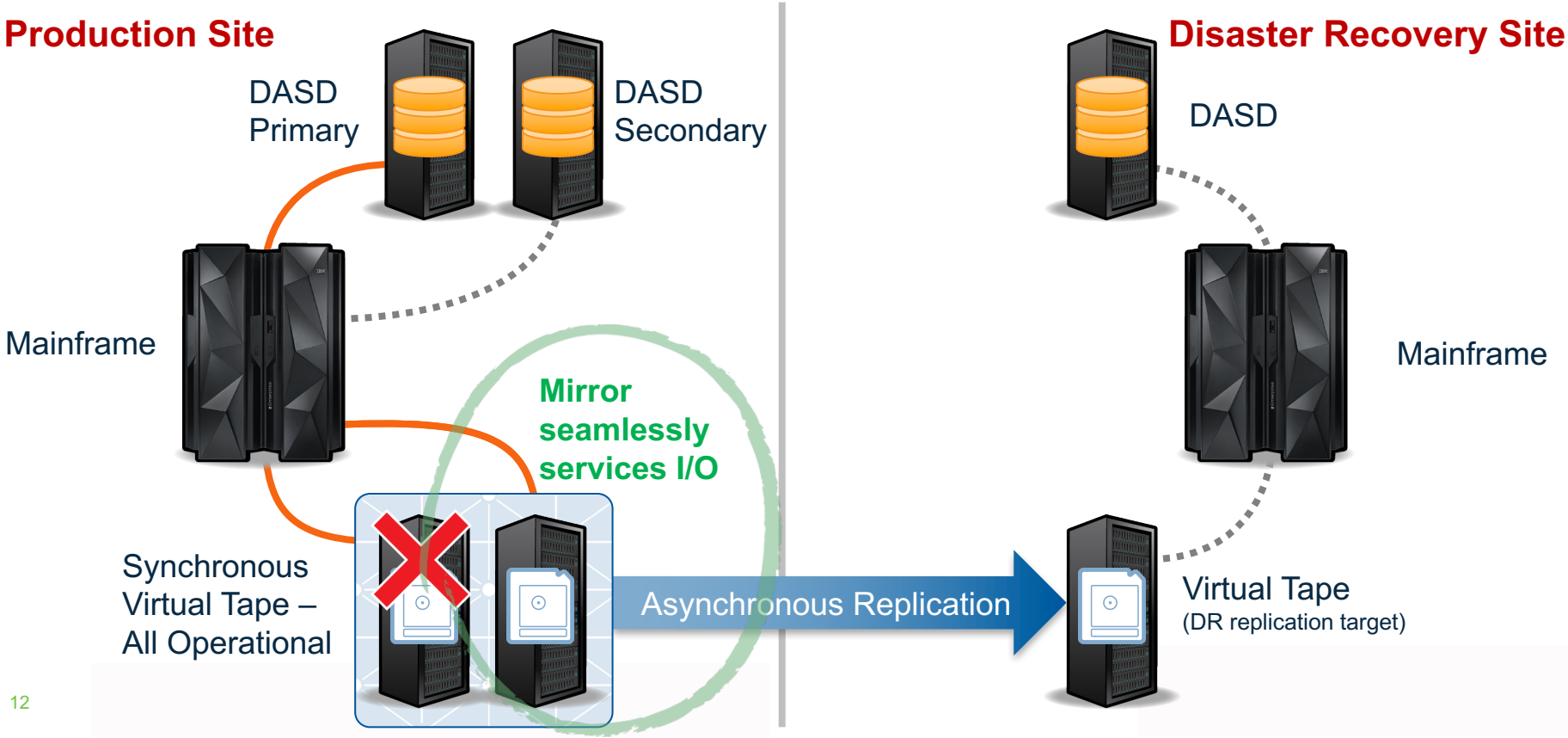
Prod/DR, GDPS/HS:
Tape Failure = Disaster Event



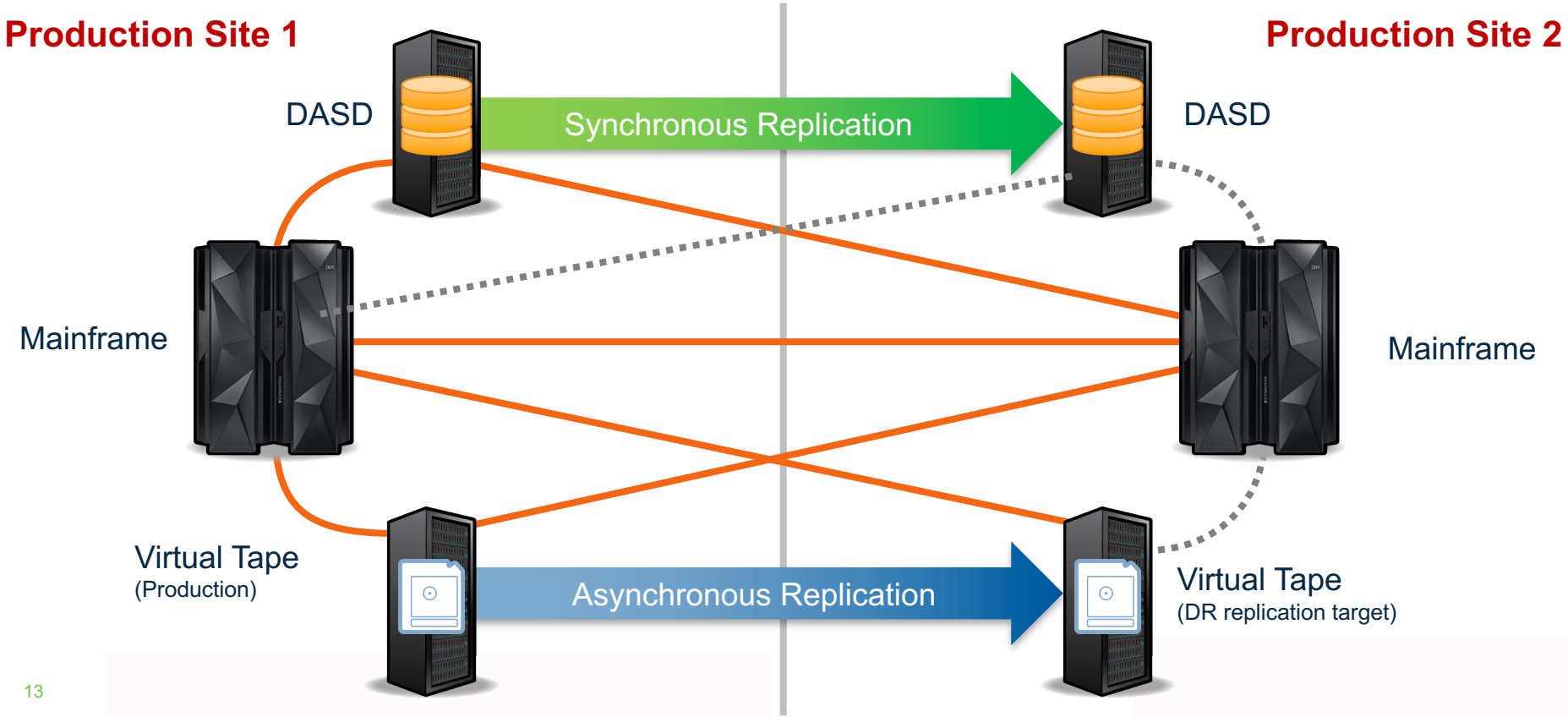
Prod/DR, GDPS/HS: Normal Operations



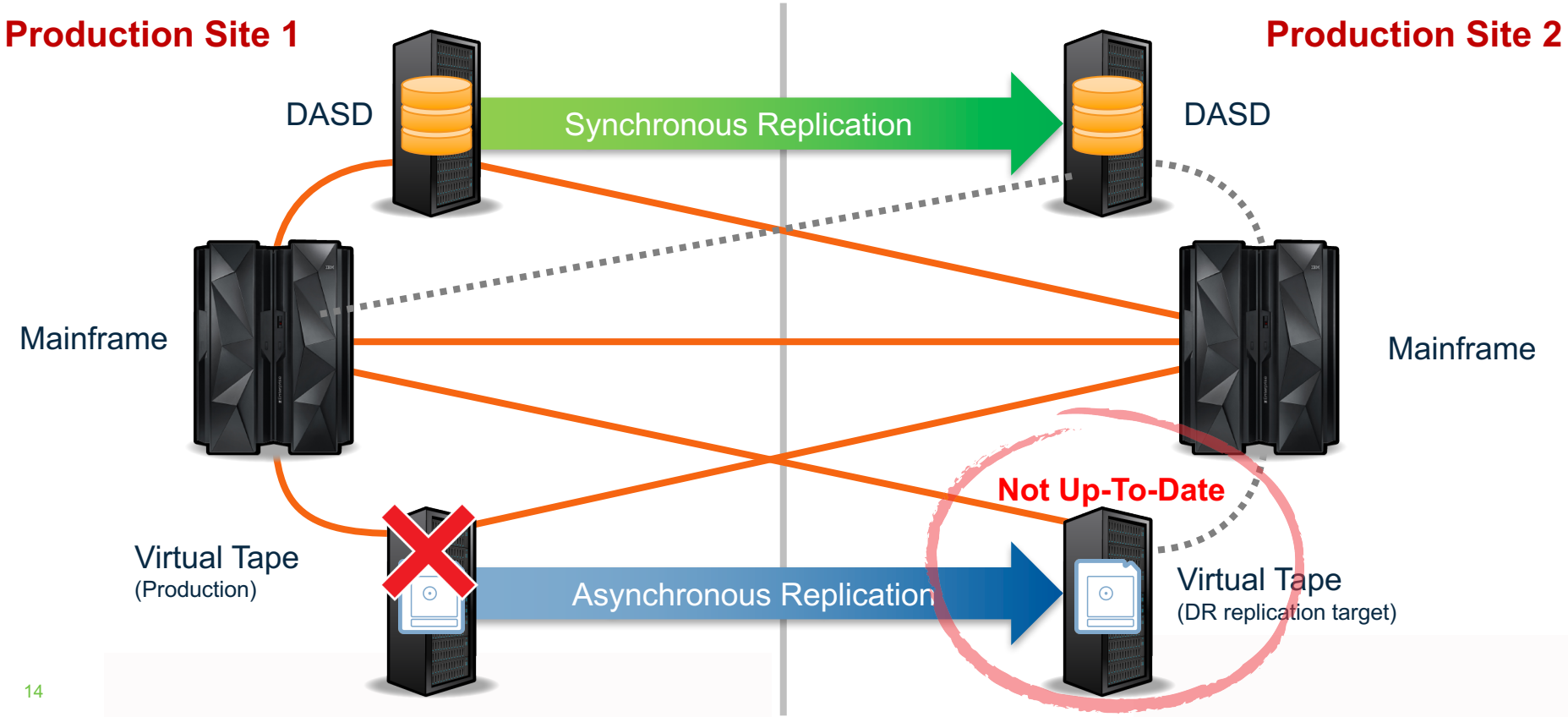
Prod/DR, GDPS/HS:
Tape Failure = Operations Continue



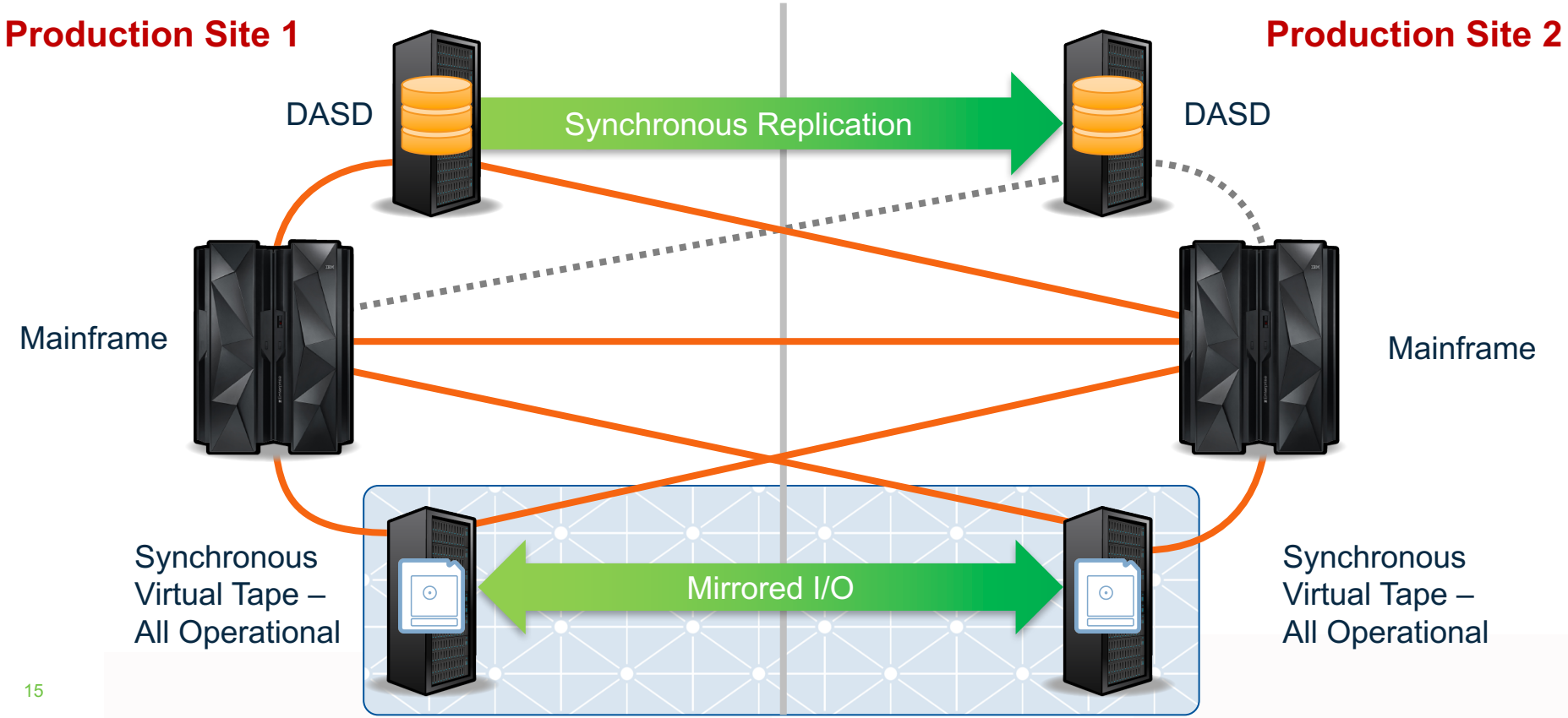
GDPS/PPRC: Normal Operations



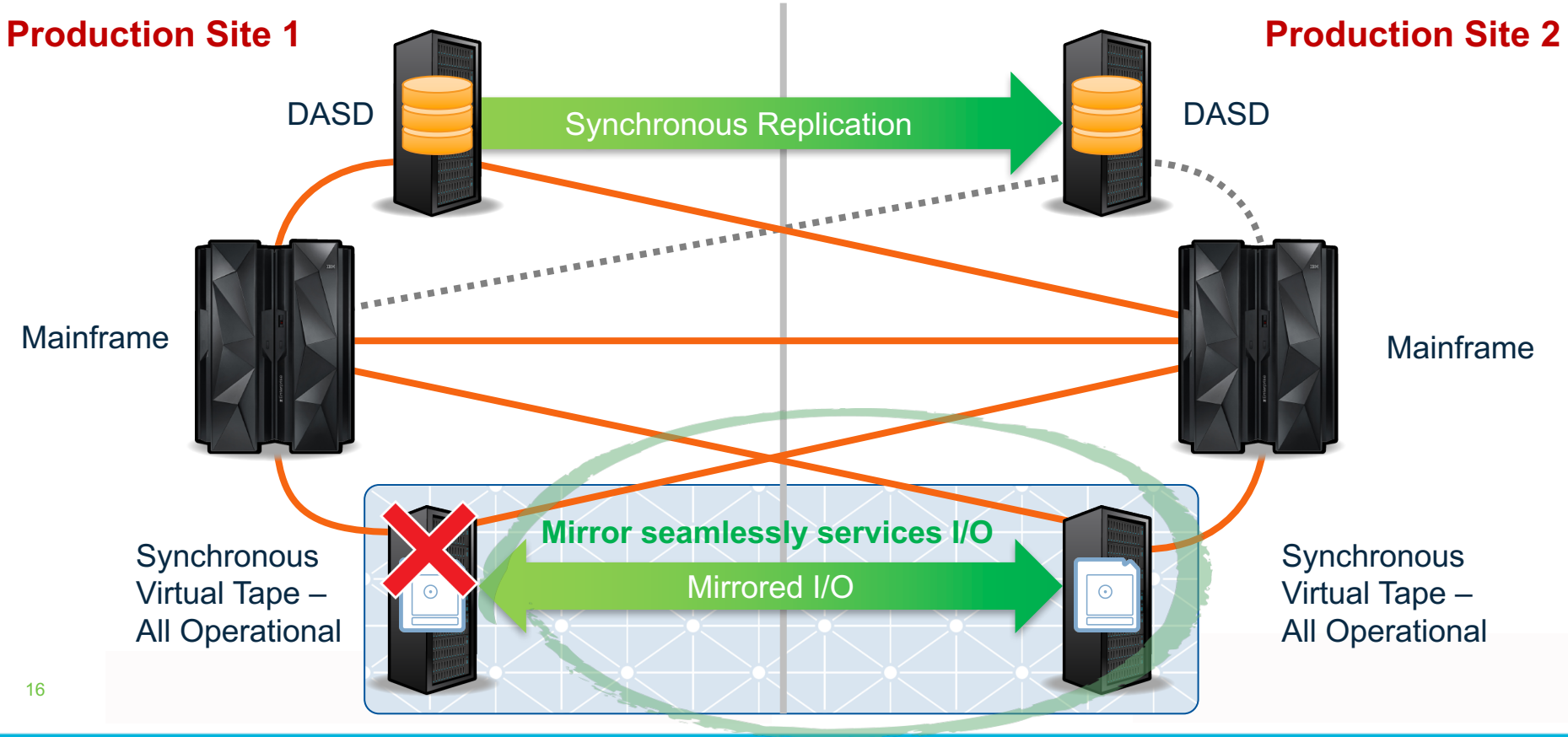
GDPS/PPRC:
Tape Failure = Tape Not Up-To-Date



GDPS/PPRC: Normal Operations



GDPS/PPRC:
Tape Failure = Tape Up-To-Date



In Summary

- Fully realize your resiliency investment in your existing mainframe environment
- No trade offs for your current needs
- Be prepared for your future needs
- Simple and understood deployment
- Implementations to enhance every environment

Complete your session evaluations online at SHARE.org/Evaluation

Except where otherwise noted, this work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 license.
http://creativecommons.org/licenses/by-nc-nd/3.0/

SHARE San Jose 2017

Synchronous Tape. Desirable? Achievable? Practical?

Dave Tolsma
dtolsma@luminex.com
Systems Engineering Manager, Luminex

#SHAREsjc

SHARE is an independent volunteer-run information technology association that provides education, professional networking and industry influence.

SHARE
EDUCATE • NETWORK • INFLUENCE

Copyright © 2016 by SHARE Inc. Except where otherwise noted, this work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 license.
http://creativecommons.org/licenses/by-nc-nd/3.0/