

SECURE360  
conference 

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DATA MASKING FOR THE REAL WORLD

MAY 15, 2013 1:15 PM

# WELCOME TO SECURE360 2013



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- Please complete the Session Survey front and back, and leave it on your seat.
- Are you tweeting? #Sec360

# PRACTICAL DATA MASKING



How to address Development and QA teams' 7 most common data masking related reactions and concerns:

☑  
Post-Masking  
Stress Disorder

You sunk  
my  
database!

Oh yeah?  
Prove it.

Just not in  
*my* backyard.

A 'zero  
business value'  
project...

Who's going  
to clean up  
this mess?

Can't we  
all just get  
along?



## Post-Masking Stress Disorder

# HELPING YOUR LOVED ONES COPE WITH THE LOSS OF THEIR REAL PRODUCTION DATA

### Challenge

- *“We won’t be able to test! The application won’t work. I can’t do my job like that...”*

### Solution

- **Make target data look and act realistic.**
- *“Let us show you – just give us a sandbox, then check out the results before giving approval.”*

### Benefit

- **Empower development teams in the process.**
- **Provide development teams with usable data.**



# Post-Masking Stress Disorder

## HAVE A PLAN!

EXECUTE DATA MASKING PILOT	START	END	OWNER
<b>Prep for Masking Pilot</b>			
Select pilot applications and environment			
Deliver On-boarding packet to pilot Application Managers			
Select target data, test scripts and cases			
Set up sandbox environment for pilot			
<b>Execute Smoke Test</b>			
Back-up environment			
Run jobs (unmasked)			
Mask data and run jobs			
Compare results			
Restore environment			
<b>Refine Masking Rules</b>			
Develop masking jobs for new Sensitive Data elements			
Repeat Smoke Test if desired			
<b>Execute Integration Test</b>			
Back-up environment			
Mask data and run jobs			
Validate results, correct any issues			
Restore environment			
<b>Execute Final Masking</b>			
Mask data			
<b>Transition</b>			
Resolve any outstanding issues from Final Masking			
Invoke process for sustaining masked environment			
Support turnover process for new Sensitive Data data			

You sunk  
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database!

# WHEN IT COMES TO MEETING APPLICATION TESTING REQUIREMENTS, REFERENTIAL INTEGRITY IS JUST THE TIP OF THE ICEBERG.

## Challenge

- *“These applications need to talk to each other even after they’re masked.”*

## Solution








- **Determine which systems:**
  - Must be masked in synch.
  - Need to be masked first, then used to feed downstream applications.
- **Identify data elements that must be preserved.**
- **Address interrelated fields.**
- **Select the best technique to mask each data element (context-dependent.)**

## Benefit

- **Applications work and interact seamlessly.**

You sunk  
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database!

## ALGORITHMS NEED TO BE SMART!

ALGORITHM	TRANSFORMATION
 Secure Lookup	Michael Jordan <i>becomes</i> Tiger Woods
 Swap/Shuffle	Cambridge, MA 02138 <i>becomes</i> Seminole, FL 33772
 Segmented Mapping	PO Box 739 <i>becomes</i> PO Box 1034
 Composite Cipher	293-78-9364 <i>becomes</i> 191-67-5473
 Public Key Encryption	(781) 665-0073 <i>becomes</i> X3aH5%j8#Kf*jG9H0
 Format Preserving Encryption	(781) 665-0073 <i>becomes</i> x8U4jN19oB73yE
 Custom	(781) 665-0073 <i>becomes</i> (781) 555-1441



A 'zero  
business value'  
project...

# HOW TO MAKE FRIENDS WITH TESTING TEAMS AND SHOW ROI AT THE SAME TIME

## Challenge

- *"This is going to slow down and complicate my work."*

## Solution

- Place more stringent controls on Production data.
- Employ automation wherever possible.

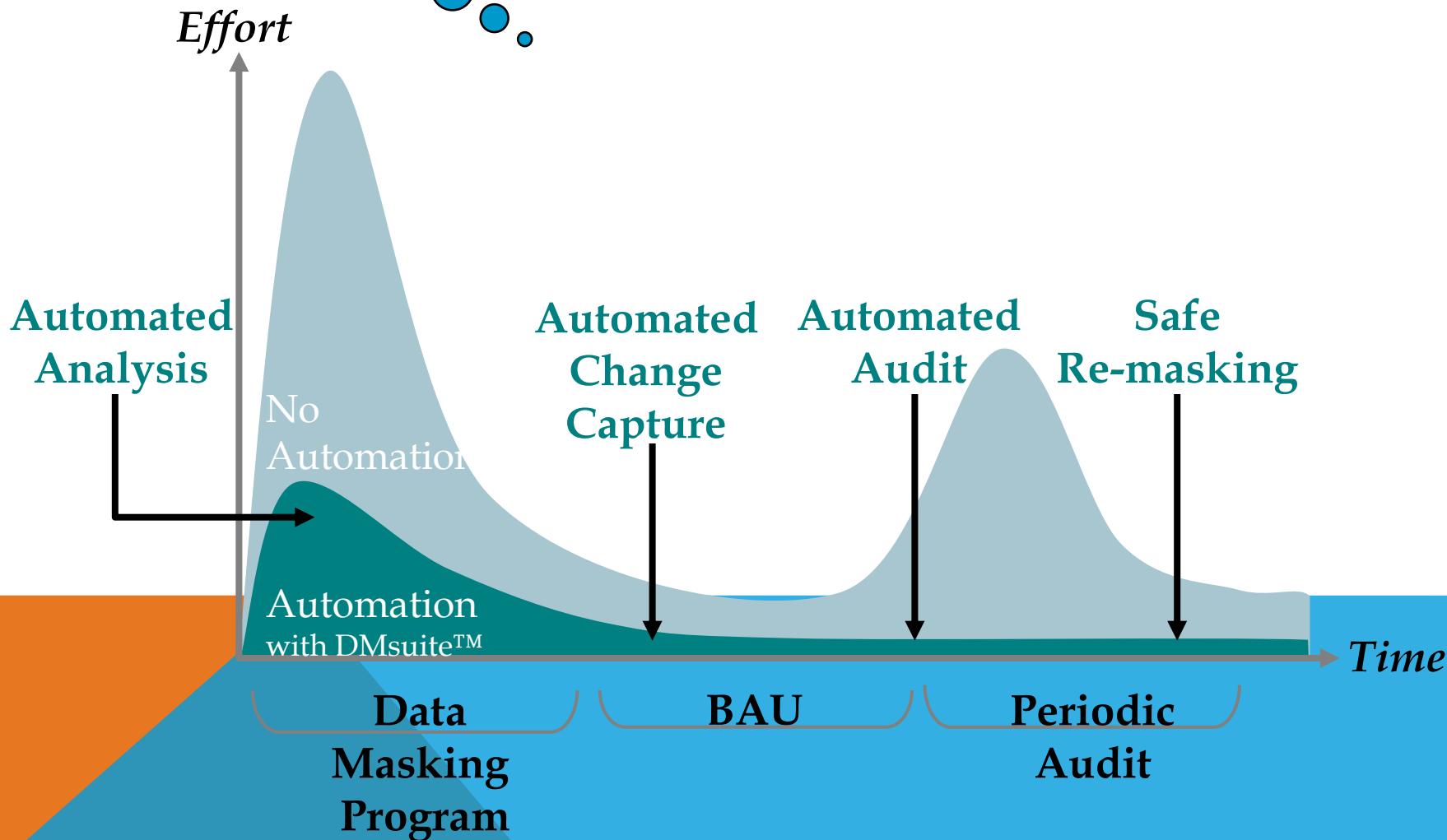
## Benefit

- A side benefit of an automated approach is that it creates greater efficiency in maintaining data masking as well as in other areas.
- With a better understanding of how the application and its data, bug- and break-fixing becomes faster and easier



A 'zero business value' project...

# AUTOMATION PAYS FOR ITSELF!





Oh yeah?  
Prove it.

# SHOWING RESULTS TO ISO's, AUDITORS, REGULATORS, AND SPONSORS

## Challenge

- *"We did masking last year, so we're all set."*

## Solution

- **Employ smart tools, process, automation and audit trails in the ongoing monitoring and periodic testing of masked environments.**

## Benefit

- **Make it easy to keep and show that a masked environment is still 'clean.'**

Oh yeah?  
Prove it.

# AGAIN, YOU NEED A PLAN!

*and a repeatable process*

CERTIFY ENVIRONMENT IS STILL 'CLEAN'	START	END	OWNER
<b>Participate in Typical Audit</b>			
Identify applications and environment (calendar)			
Show Sensitive Data Inventory			
Show Data Context Diagram			
Show Data Provisioning Process Diagram			
Show Data Samples from environment			
Sign-off for Certification			
<b>Run Profiler Test (if required)</b>			
Run Profiler to detect presence of any sensitive data			
Perform typical activities (e.g. wait 1 work week)			
Run Profiler to detect presence of any sensitive data			
Show results before v.s after			
Research and fix any issues found and re-run test			
Sign-off for Certification			
<b>Demonstrate Masking (if required)</b>			
Create demo area			
Create mock Prod data (tip: use Auditor's name)			
Mask mock Prod data			
Show data before vs. after			
Document then delete demo			
Sign-off for Certification			



Just not in  
*my* backyard.

# WHERE DOES DATA MASKING FIT INTO YOUR OVERALL INFORMATION SECURITY FRAMEWORK

## Challenge

- *“We already don’t just give ‘anyone’ access...”*

## Solution

- **Keep in mind that Data Masking is not a one-time event; it’s one of several tools in your Data Security Toolkit.**

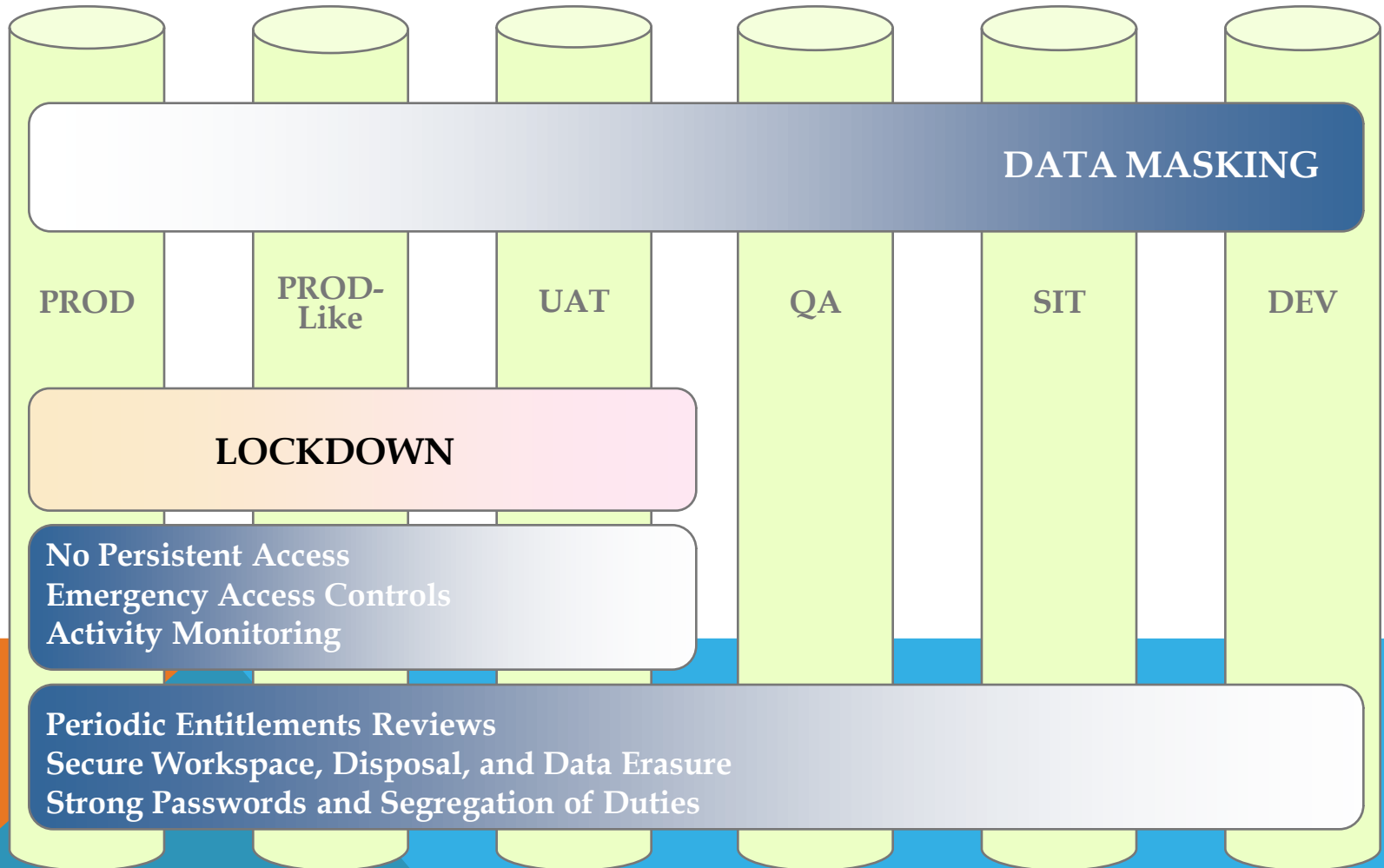
## Benefit

- **Knowing when and where to employ data masking versus other data confidentiality controls (RBAC, lockdown, etc.) helps your organization avoid a slow-down in productivity.**



Just not in  
*my* backyard.

# WHERE DOES DATA MASKING FIT INTO YOUR OVERALL INFORMATION SECURITY FRAMEWORK



Who's  
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# INTEGRATING DATA MASKING INTO THE APPLICATION DEVELOPMENT LIFECYCLE

## Challenge

- *“How am I supposed to get my job done if I have to mask data at every step of the way?”*

## Solution

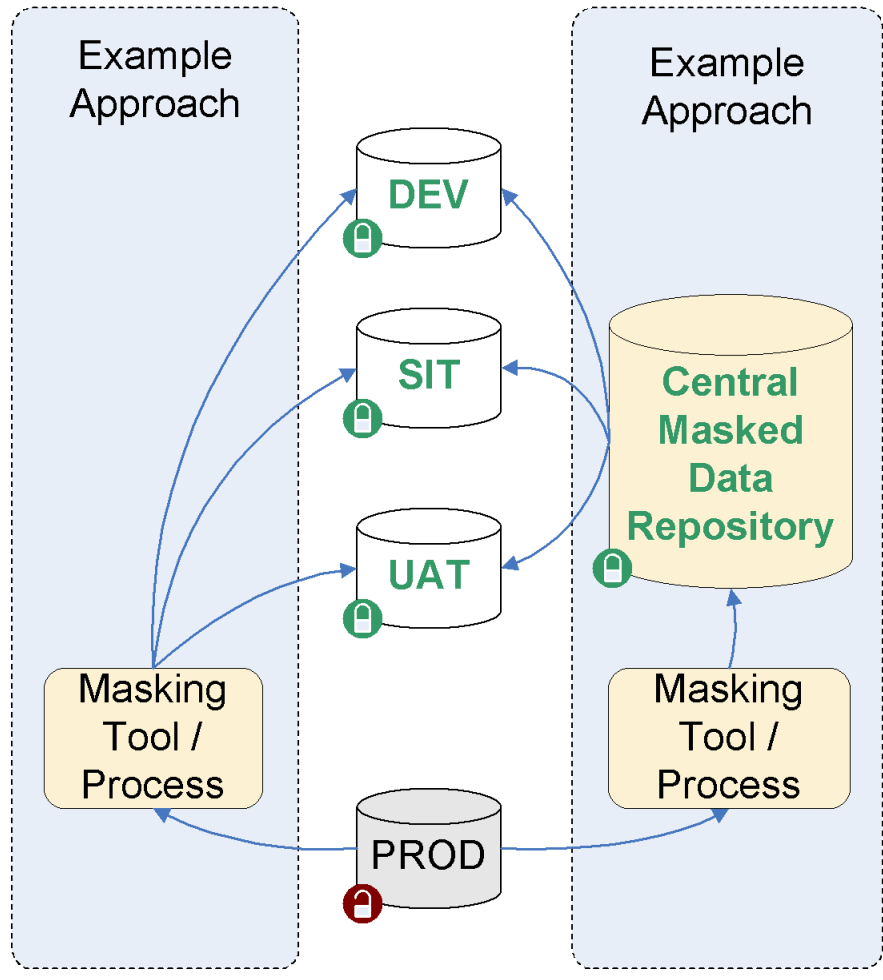
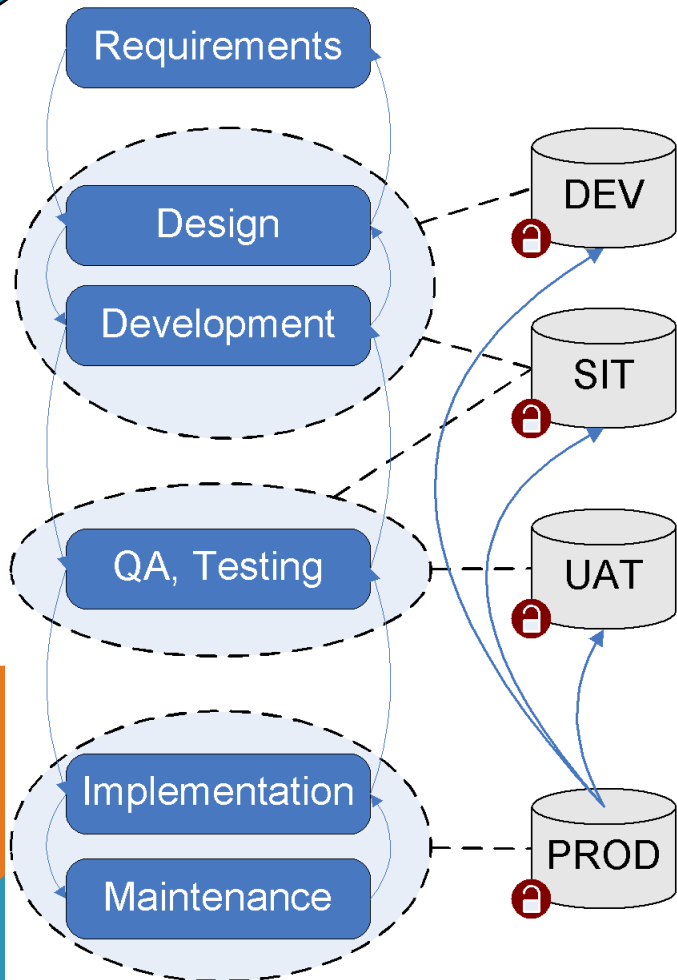
- Analyze each SDLC instance to determine the best potential ‘in point’ for data masking.

## Benefit

- Data masking becomes part of the ongoing process, yet remains as behind-the-scenes as possible.

Who's going to clean up this mess?

# GOLD COPY vs. ON DEMAND





Can't we  
all just get  
along?

# OPTIONS FOR A SHARED CENTER OF EXCELLENCE DATA MASKING ARCHITECTURE

## Challenge

- *"Sure this'll work for us, but our systems feed and receive data across businesses."*

## Solution

- **Build at least a basic-level Center of Excellence for Data Masking.**

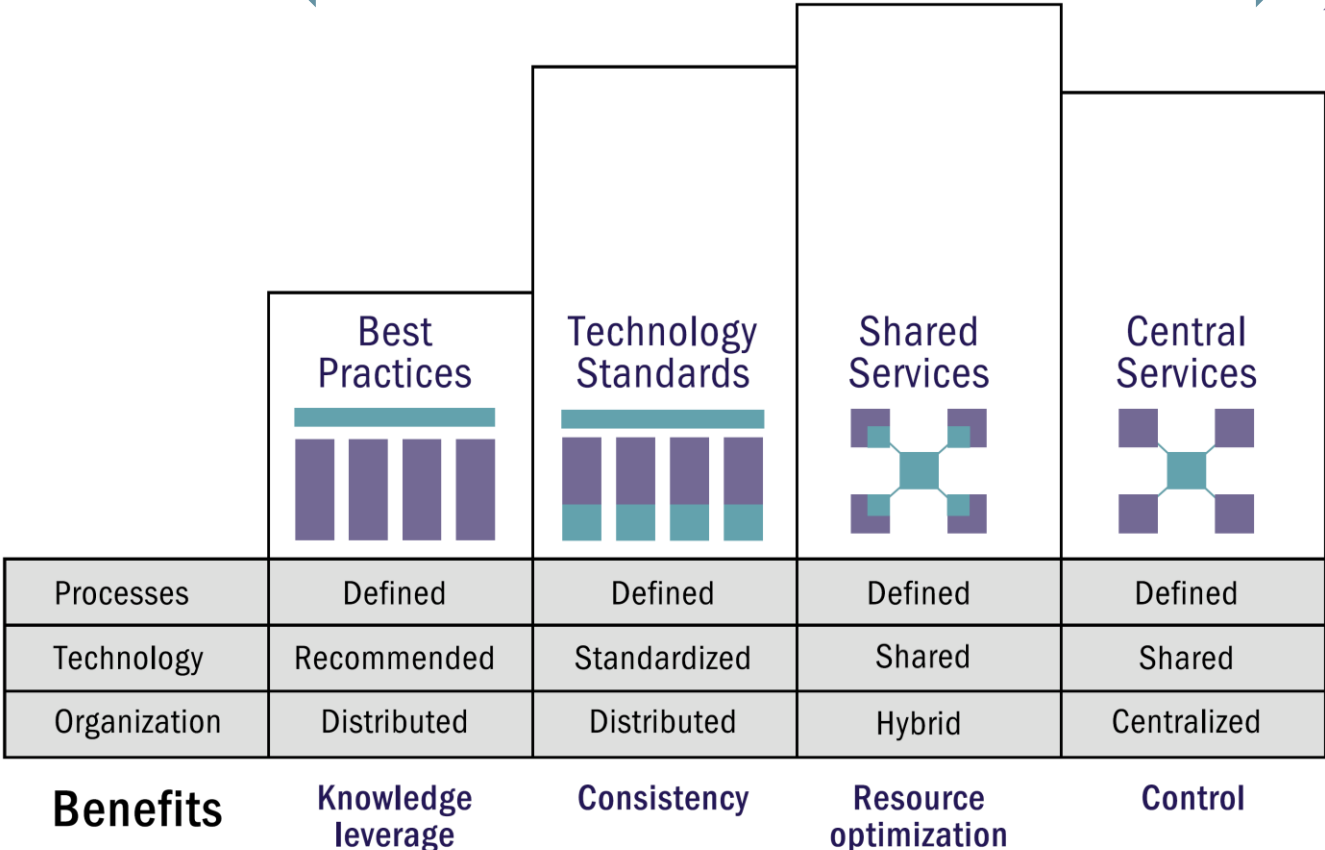
## Benefit

- **Achieve economies of scale by enabling your businesses to share knowledge about and resources for:**
  - ✓ Process
  - ✓ Technology
  - ✓ Organization



Can't we all just get along?

# OPTIONS FOR A SHARED CENTER OF EXCELLENCE ARCHITECTURE FOR DATA MASKING



Relative Value

# THANK YOU

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**DMsuite**<sup>TM</sup>  
**Data Masking by Design**

