Disaster Recovery is just a Surprise Data Migration

James Hunt

@iamjameshunt
https://github.com/jhunt
https://jameshunt.us

EXIT

❤️ DevOps Days Buffalo

THANK YOU

To: James
From: CFP Board
Subject: Your Talk Submission

Dear James,

I regret to inform you that your talk,

Tarballs and TARDISes: The Role of the POSIX TAR format in Time Travel

has not been accepted for USENIX '18. Unfortunately, we do not feel that your subject benefits the UNIX ecosystem at this time.

Thanks,
The CFP Board

To: Mr. Hunt
From: ???
Subject: CFP Announcement!

Dear Mr. Hunt,

It is with a heavy heart that I write to inform you that your talk submission,

1.21 Jiggabytes: The Application of Amazon S3 Blobstore to the Flux Capacitor Problem and the Time Traveler's Dilemma

has regrettably not been accepted for our upcoming forum. Best of luck to you in the past, present, and future.

~ Time Traveler's Forum 2173

To: James Q. Hunt
From: no-reply@qsec
Subject: Re: Your Talk Submission

Dear James,

We regret to inform you that we are unable to invite you to speak at QSEC2019 — International Conference on Quantum Systems in Extreme Conditions, as your talk,

Time Loops and Cloud Storage

does not meet our criteria for scientific rigor or academic integrity.

Yours,
QSEC CFP Committee

To: J. Hunt
From: Watchmakers' Summit
Subject: CFP Process Results

Dear J.,

Your talk,

The Application of Compression and Archival Formats to travel in n-dimensional Space and Time

has not been accepted to Watchmakers' Summit '17. That is not what this conference is about.

THEOREM:

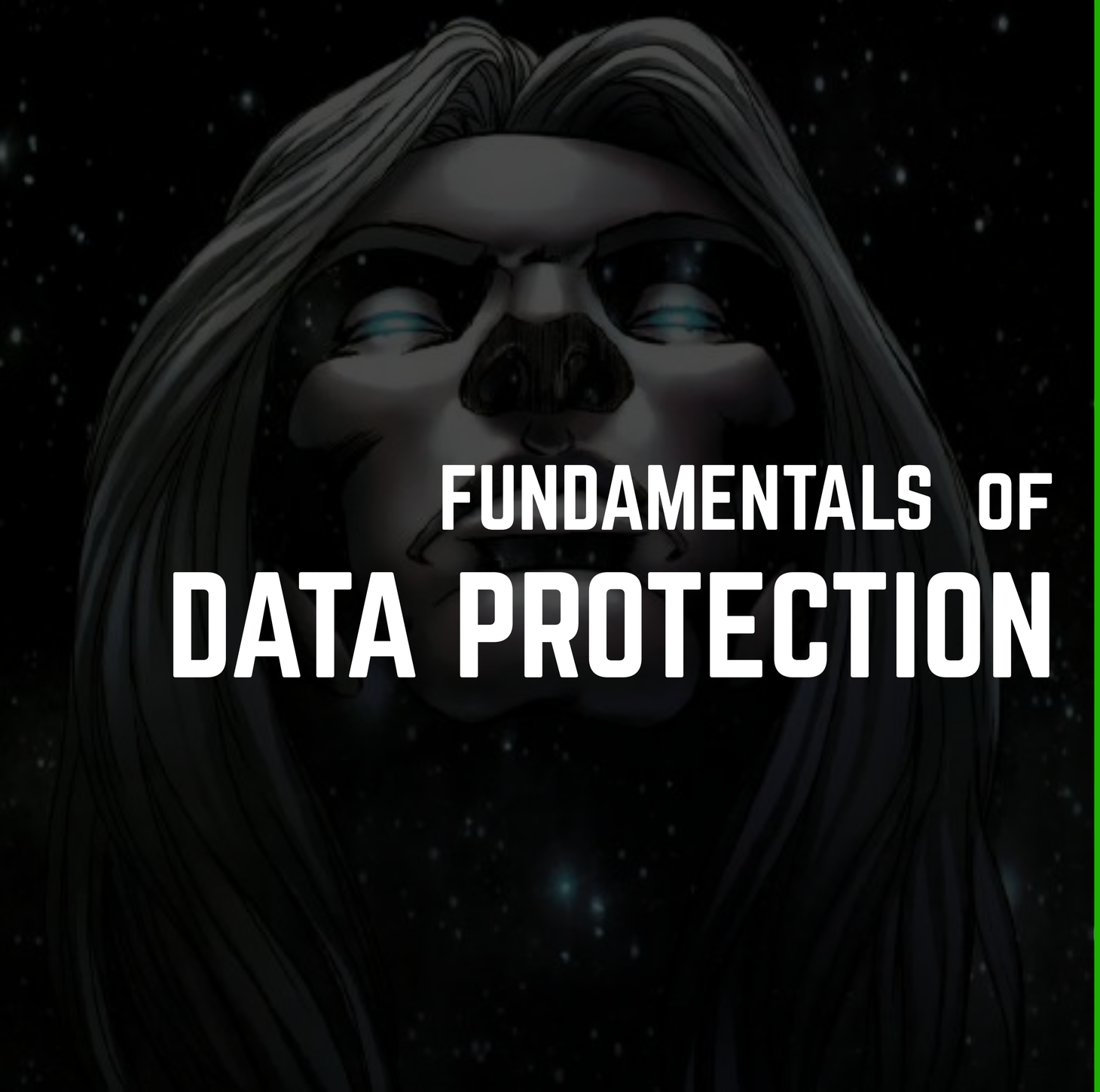
DATA BACKUPS

ARE INDISTINGUISHABLE FROM

TIME TRAVEL

PROOF:

IF WE HAD A TIME MACHINE, WE WOULD NOT NEED BACKUPS



FUNDAMENTALS OF DATA PROTECTION

TARGET

TARGET

A DATA SYSTEM

- FILESYSTEM
- RELATIONAL DB
- NoSQL DB
- KEY-VALUE STORE
- ETC...

STORE

CLOUD STORAGE

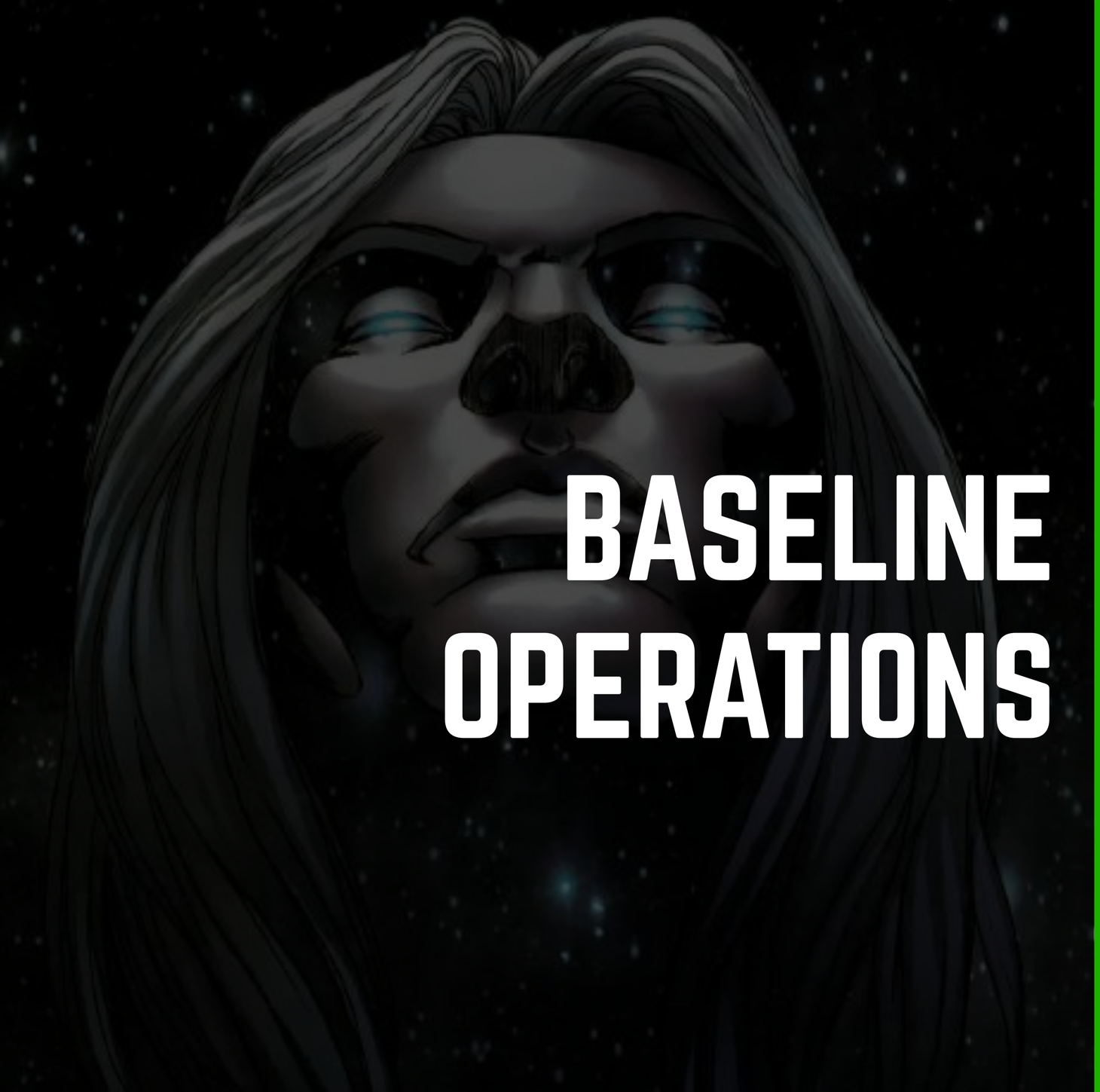
- AMAZON S3
- AZURE BLOBSTORE
- GOOGLE BLOBSTORE
- WEBDAV
- BACKBLAZE
- ETC.

STORE

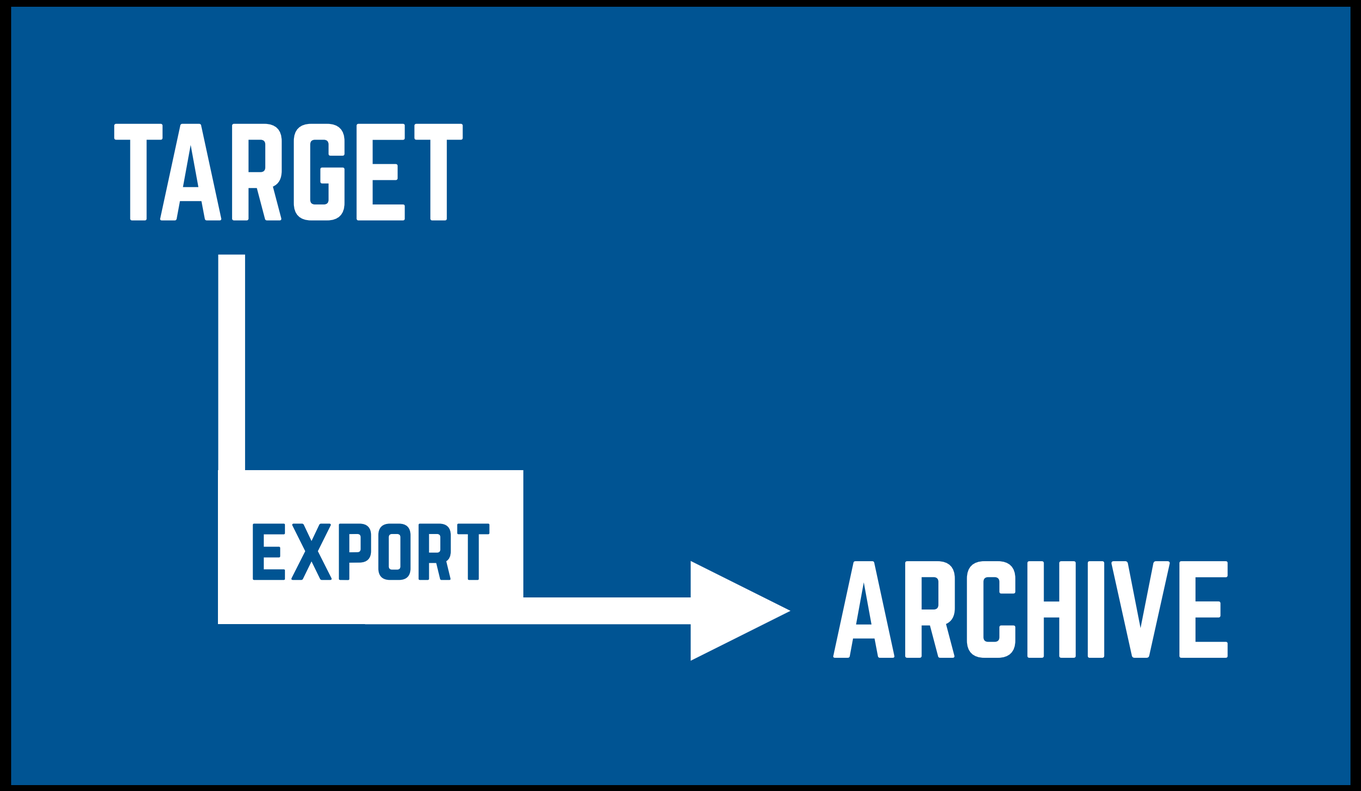
TARGET

ARCHIVE

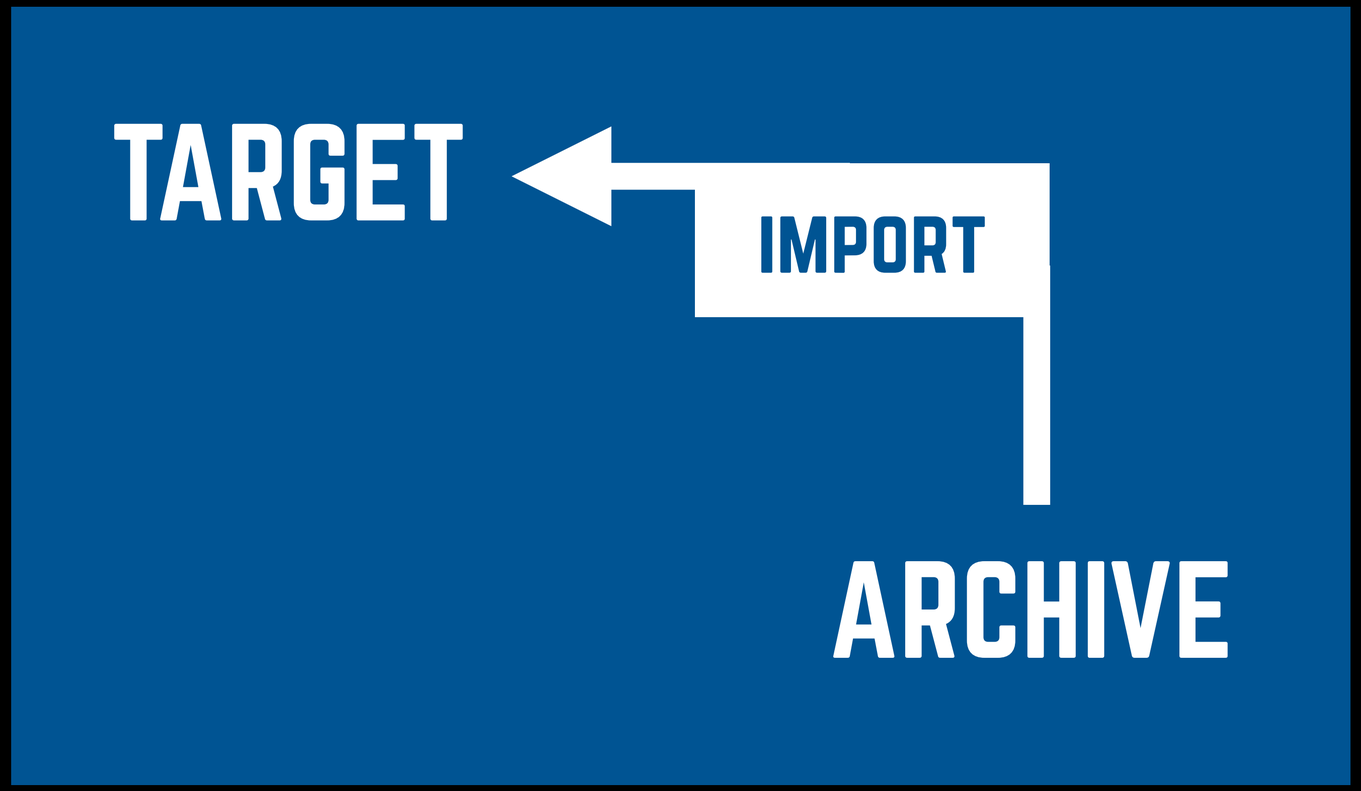
STORE



BASELINE OPERATIONS

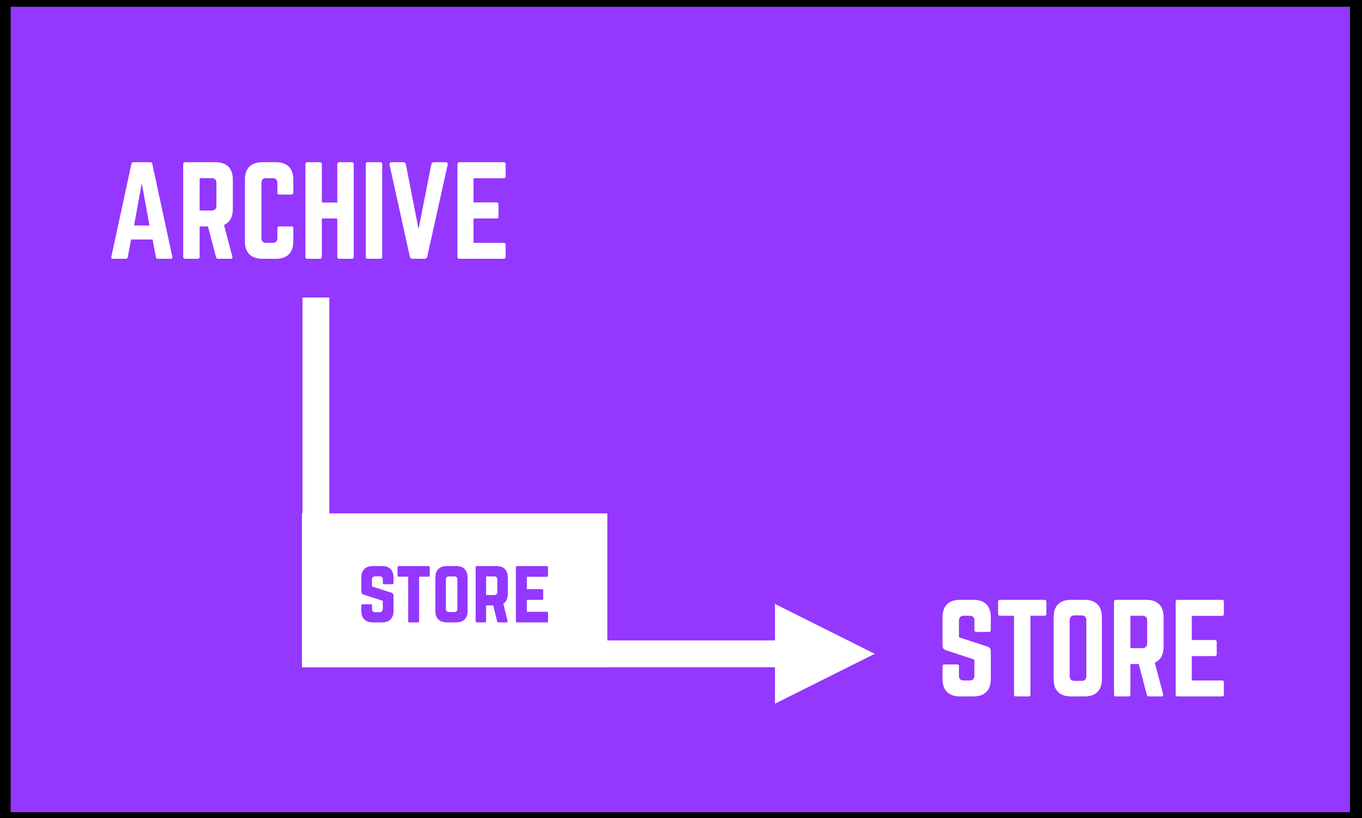


pgdump
mysqldump
tar -c
etc.

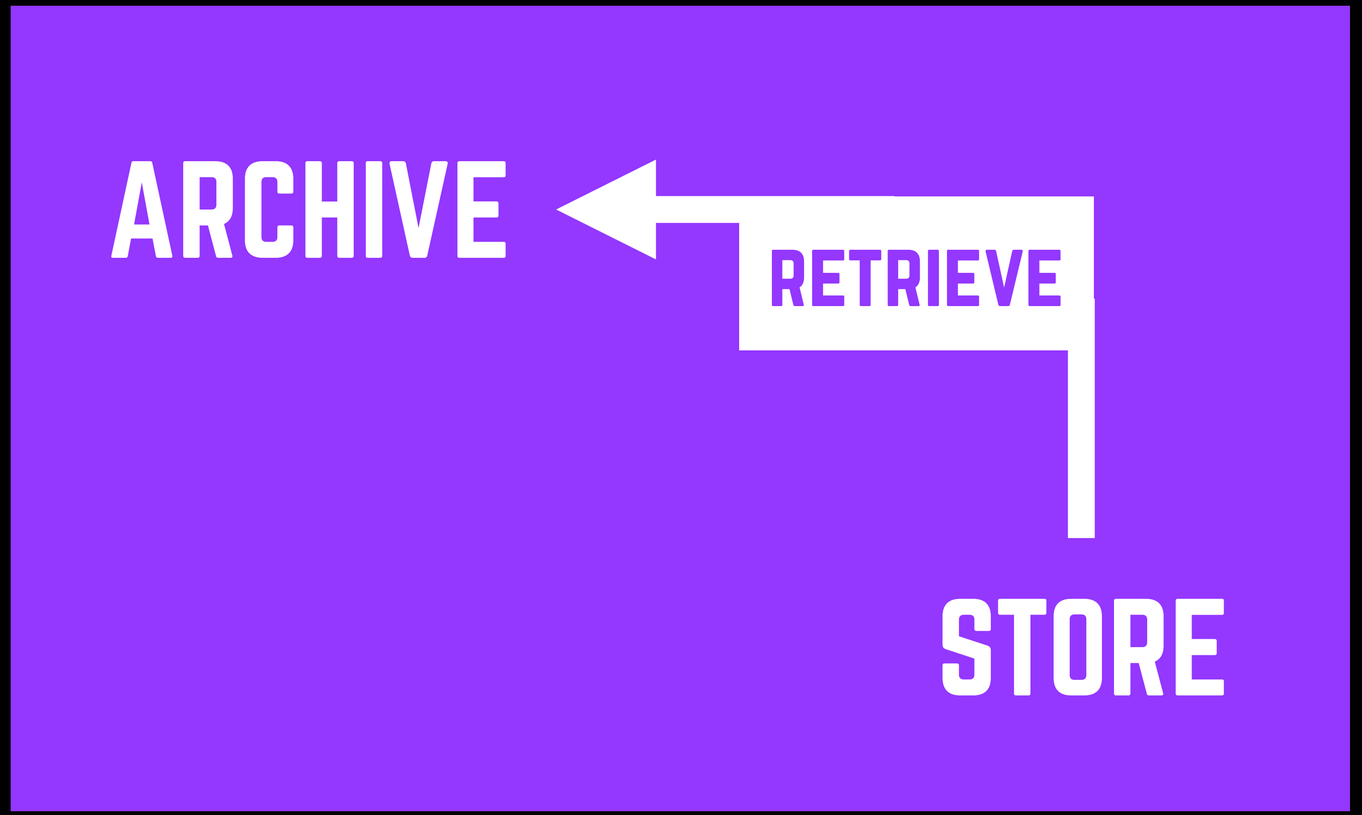


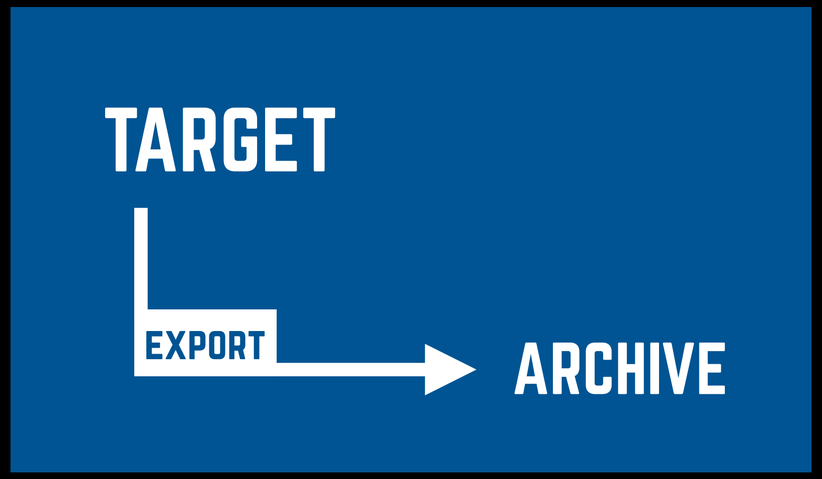

```
psql
mysql
tar -x
etc.
```

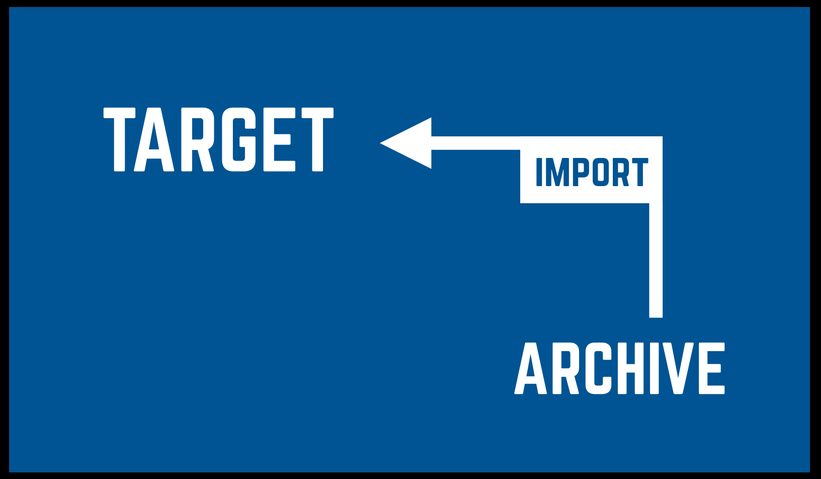
s3 put
PUT /webdav
etc.



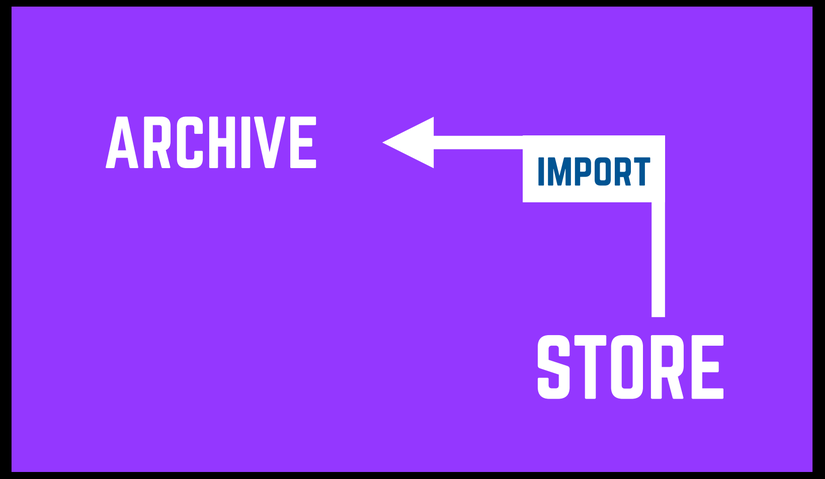
s3 get
GET /webdav
etc.




TARGET
EXPORT
ARCHIVE


TARGET
IMPORT
ARCHIVE

ARCHIVE
STORE
STORE

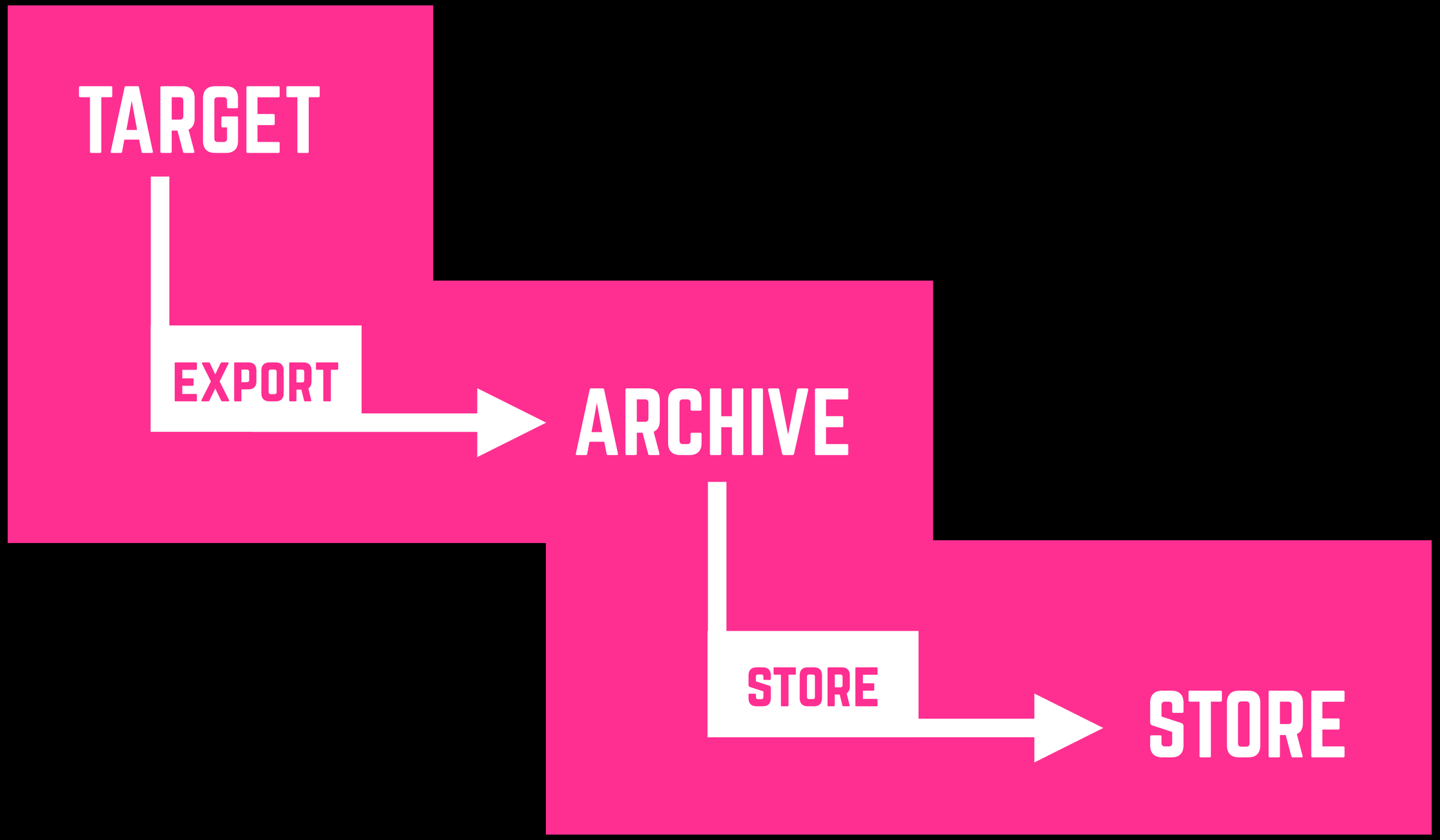

ARCHIVE
IMPORT
STORE

COMPOSING FUNDAMENTALS

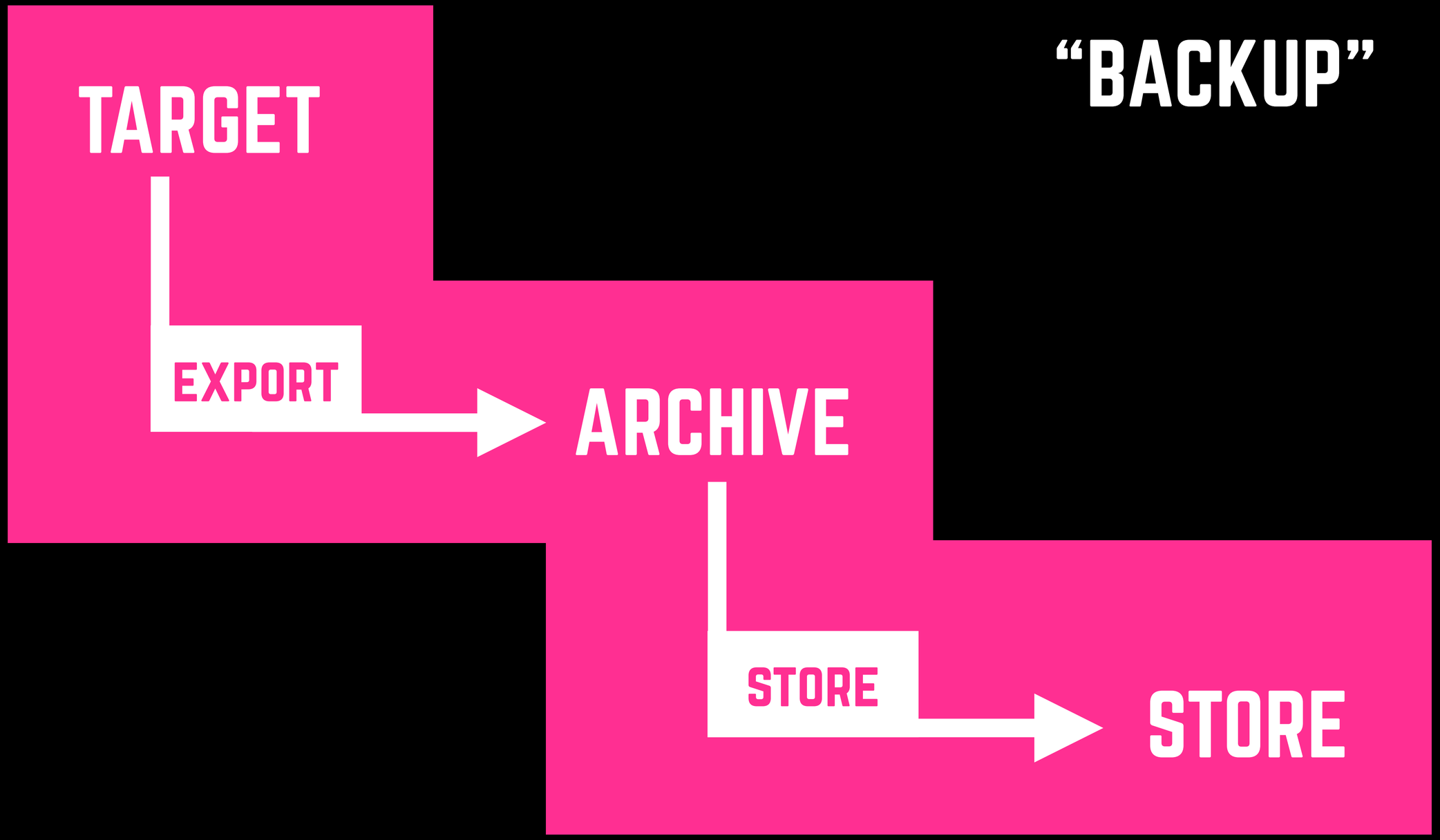
WARNING:

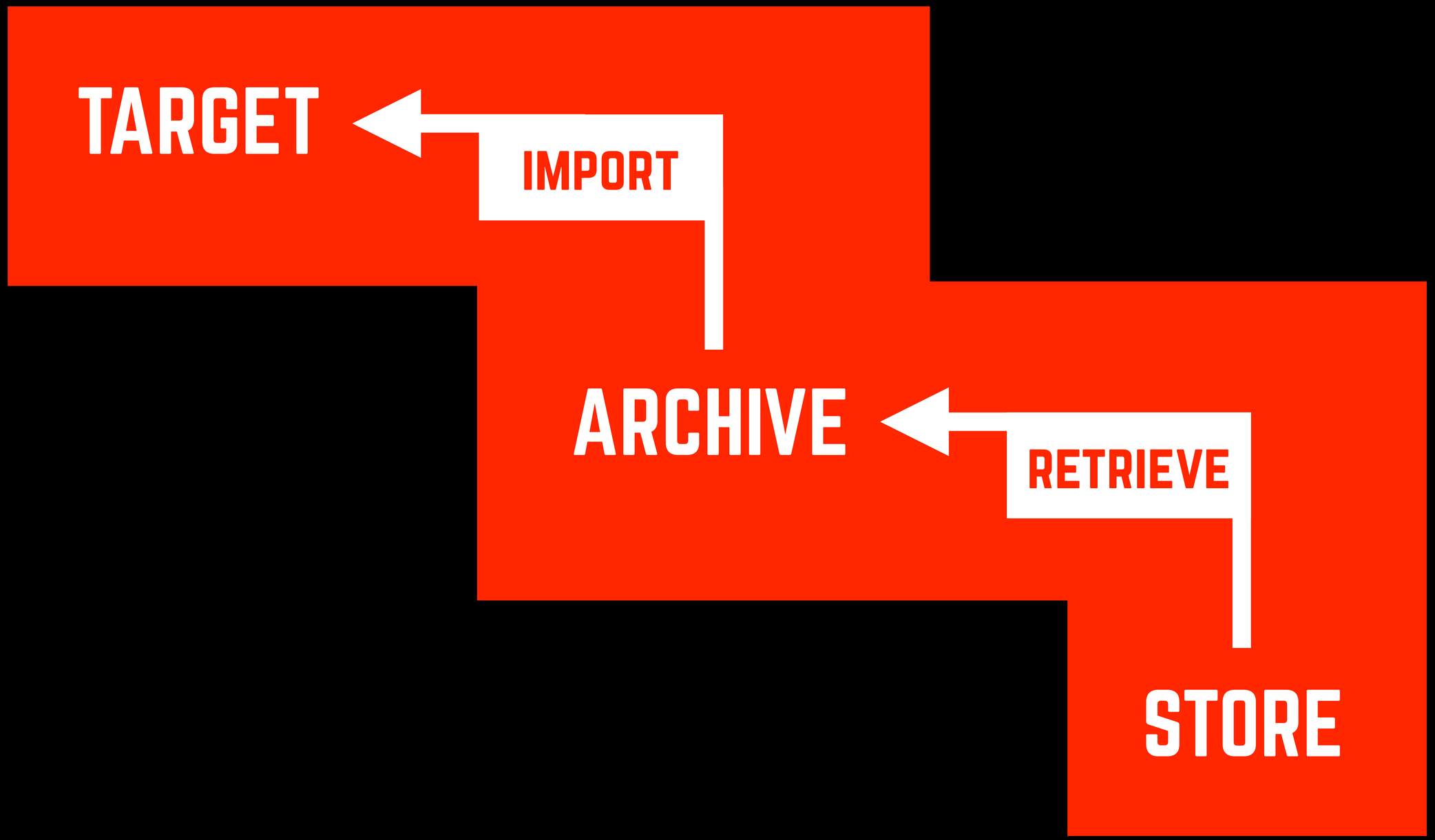
BOXES AND ARROWS

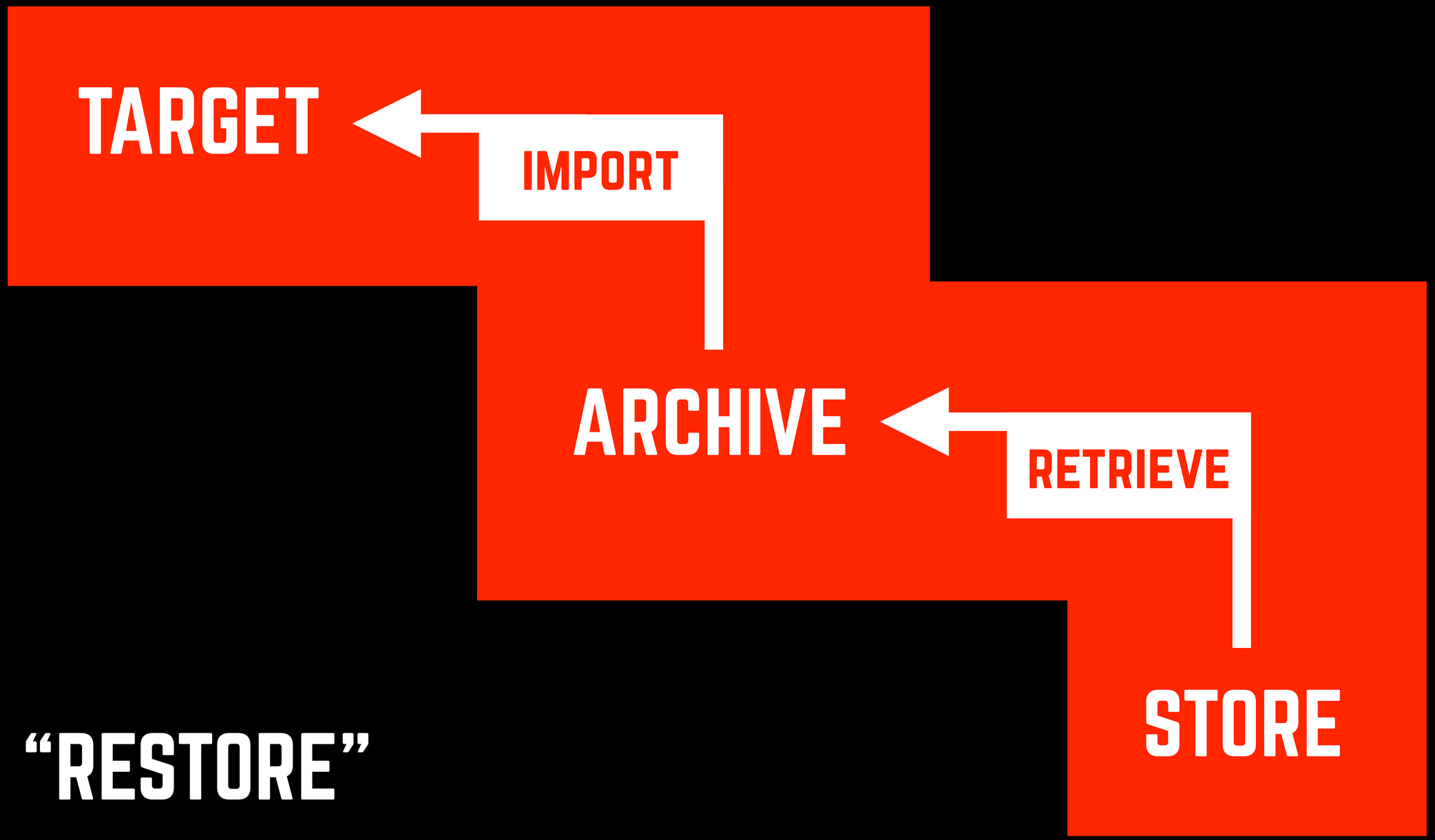
AHEAD


TARGET
EXPORT
ARCHIVE
STORE
STORE

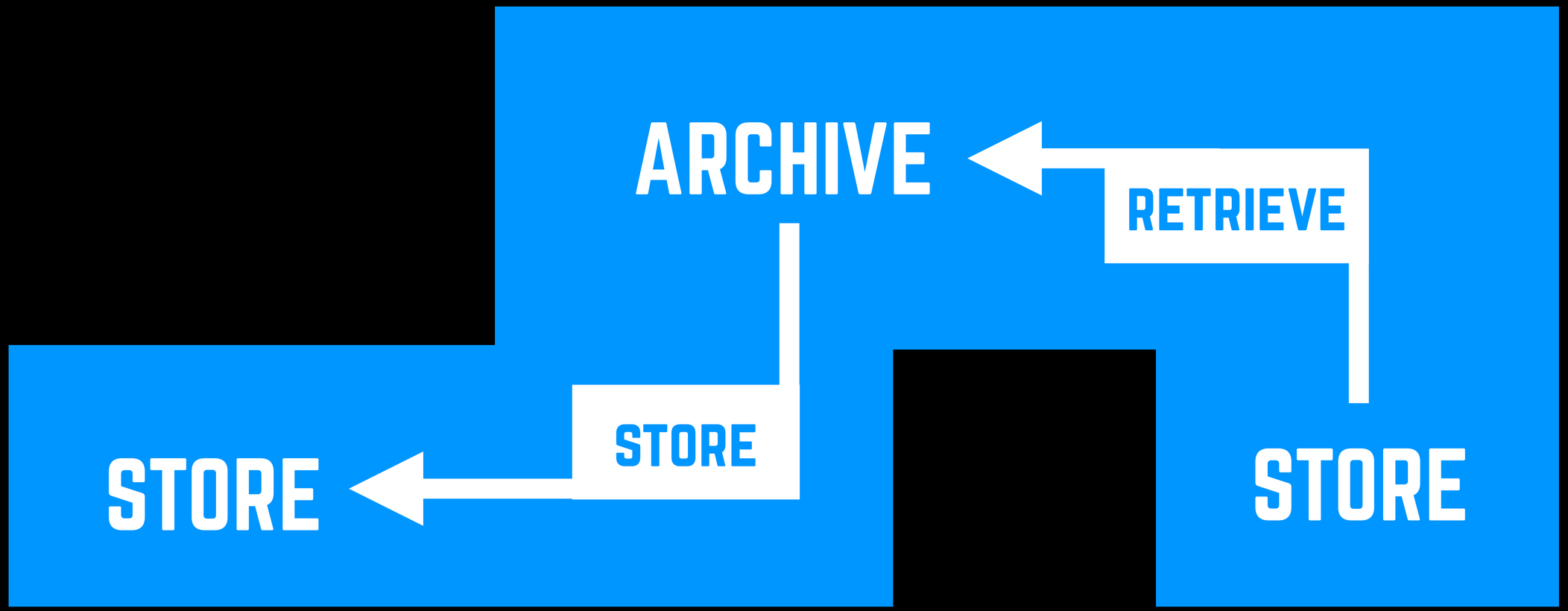
“BACKUP”



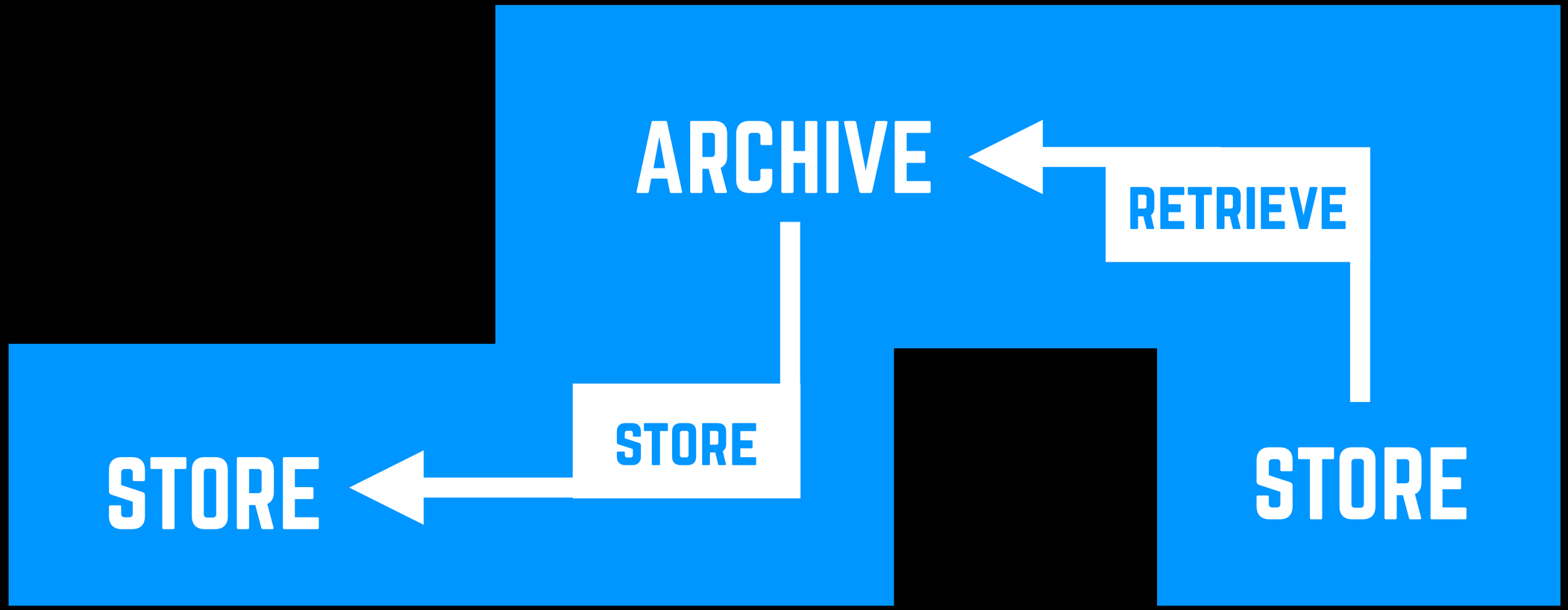

TARGET
IMPORT
ARCHIVE
RETRIEVE
STORE

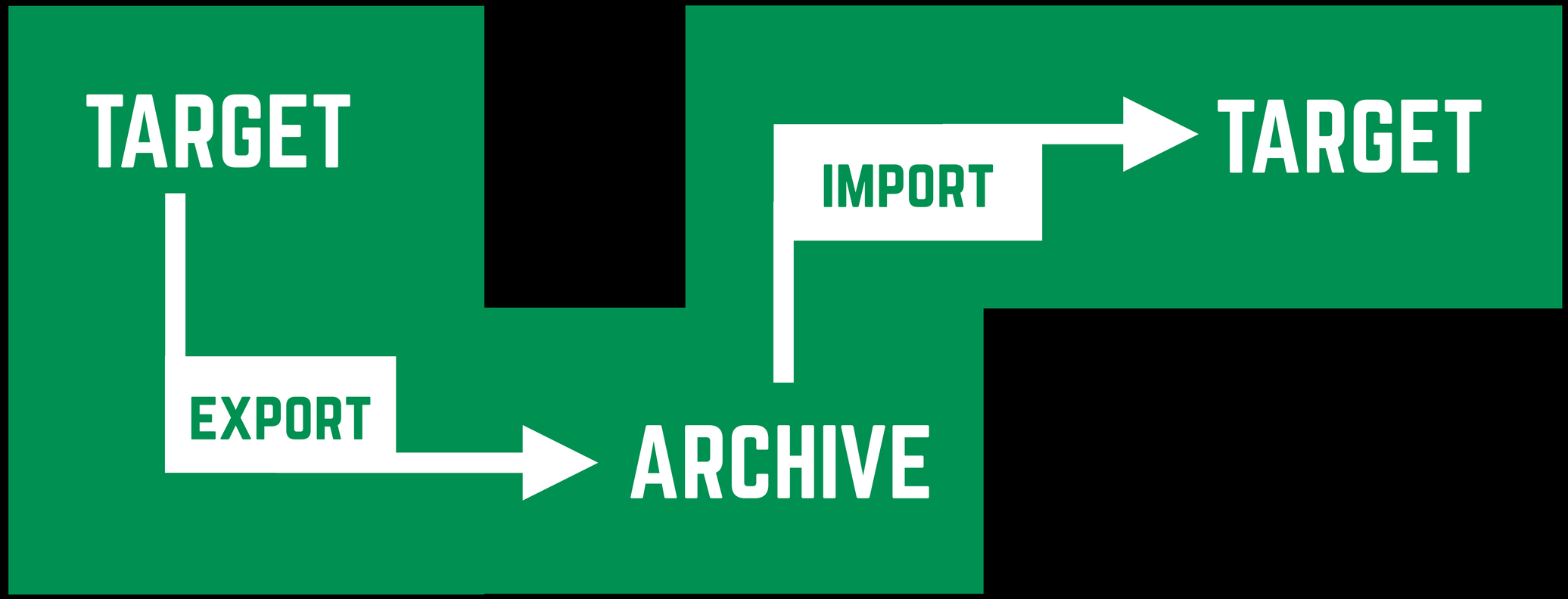


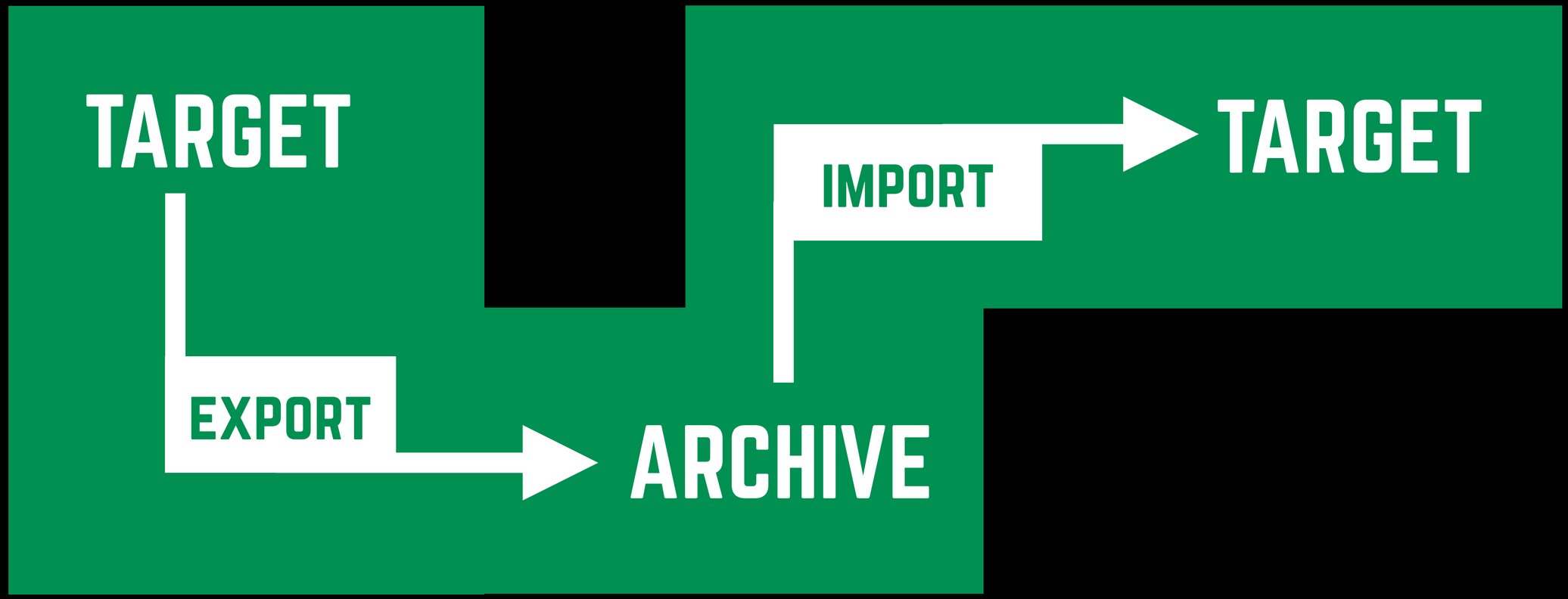
“RESTORE”


ARCHIVE
RETRIEVE
STORE
STORE
STORE

“STORAGE MIGRATION”




TARGET
EXPORT
ARCHIVE
IMPORT
TARGET

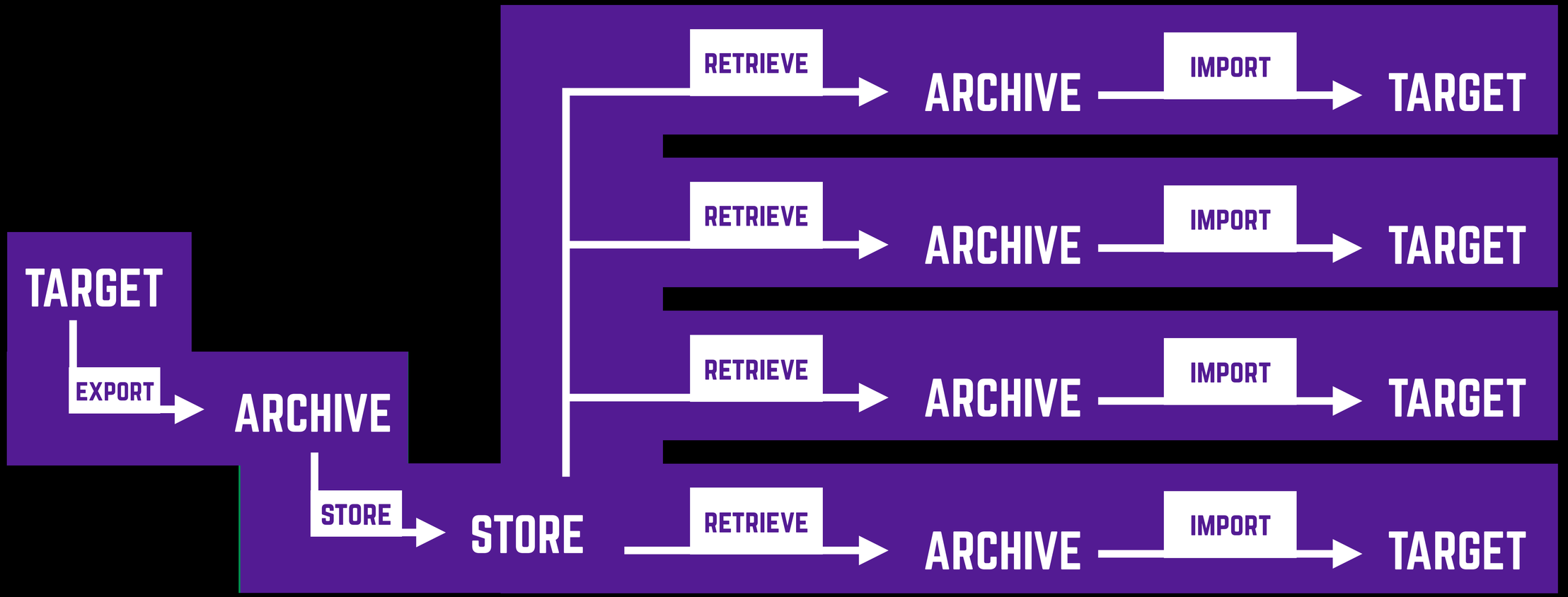


“DATA MIGRATION”

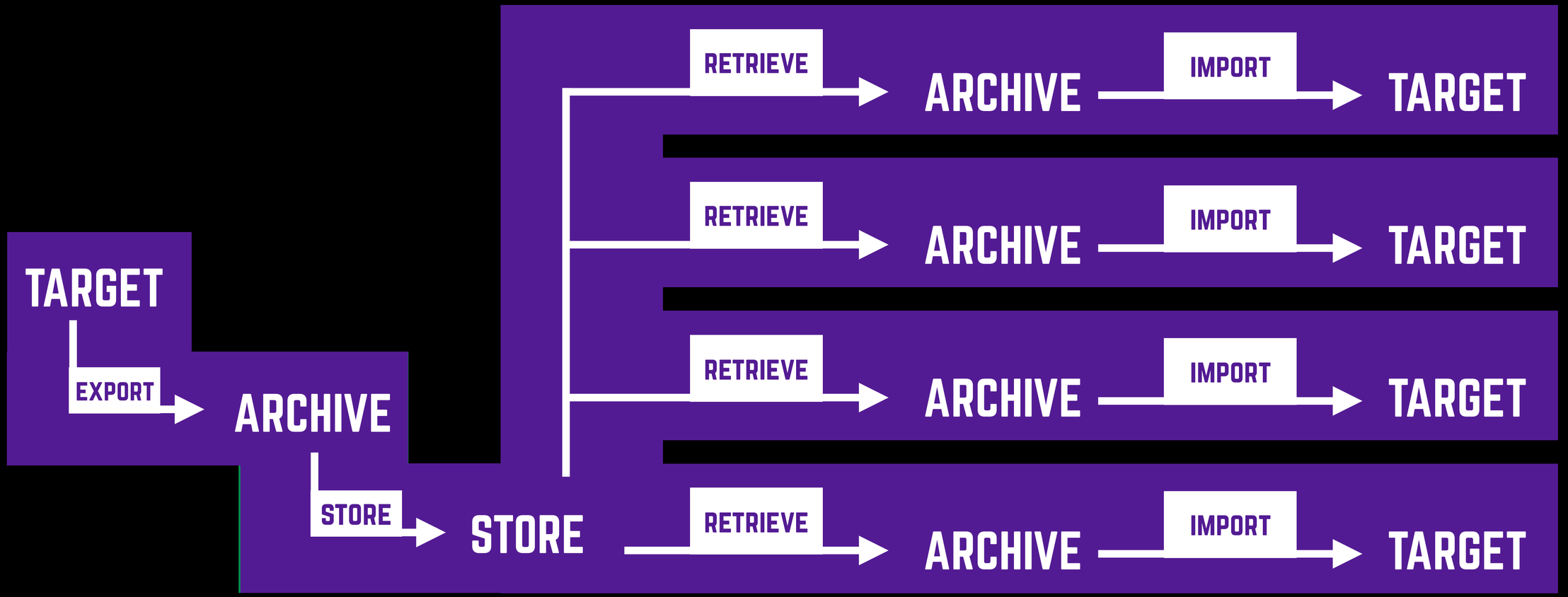
TARGET
EXPORT
ARCHIVE
STORE
STORE
RETRIEVE
ARCHIVE
IMPORT
TARGET

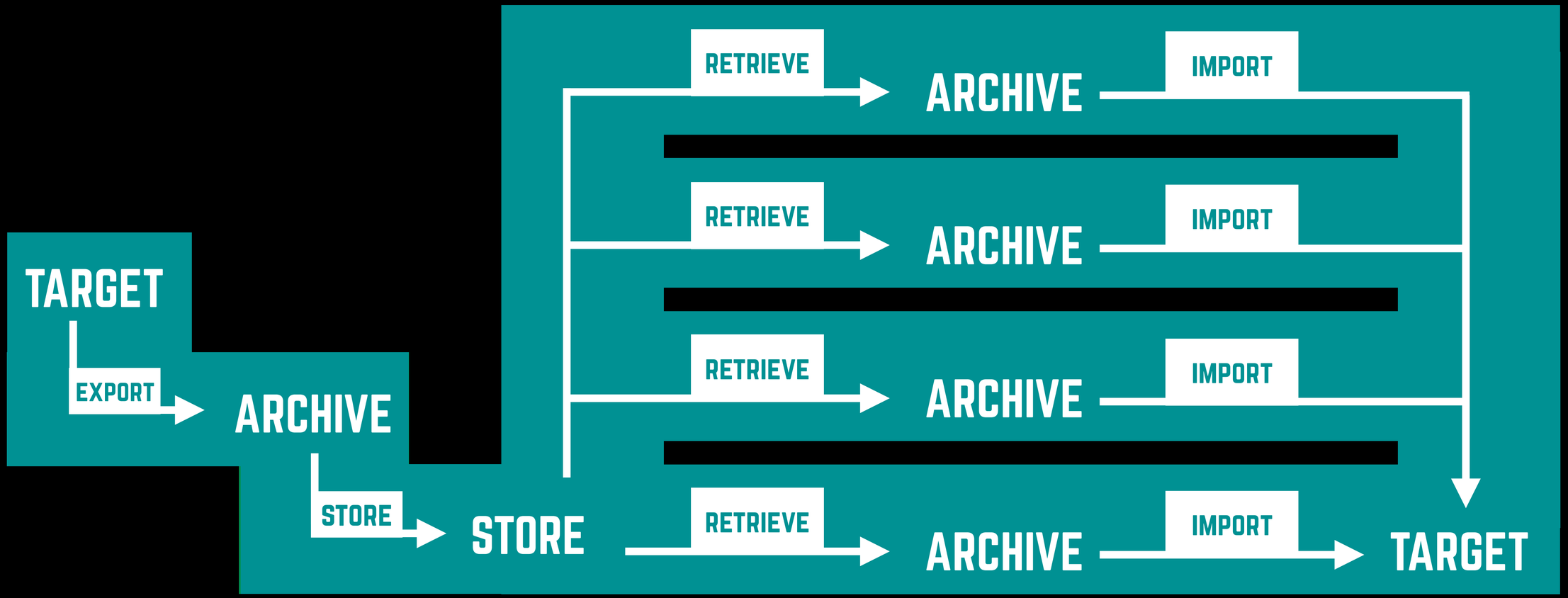
ALSO

“DATA MIGRATION”

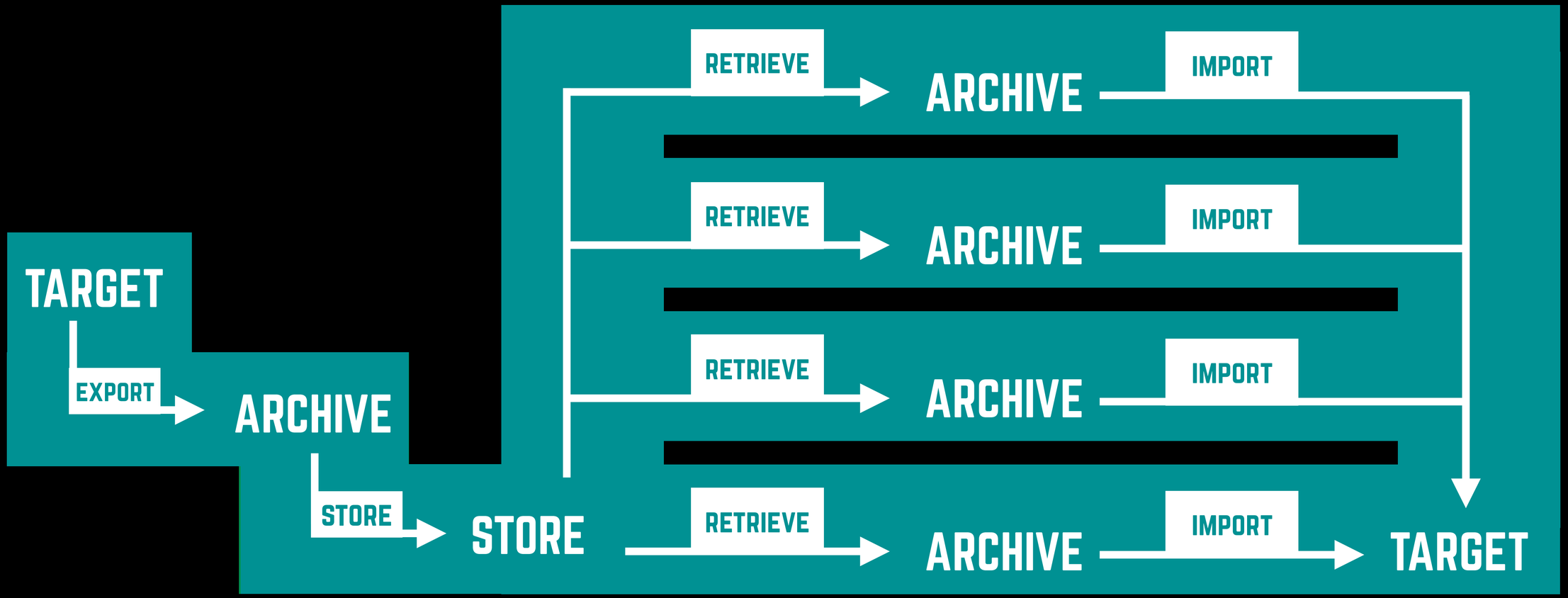

TARGET
EXPORT
ARCHIVE
STORE
STORE
RETRIEVE
ARCHIVE
IMPORT
TARGET
RETRIEVE
ARCHIVE
IMPORT
TARGET
RETRIEVE
ARCHIVE
IMPORT
TARGET
RETRIEVE
ARCHIVE
IMPORT
TARGET

“CLONE SYSTEM”



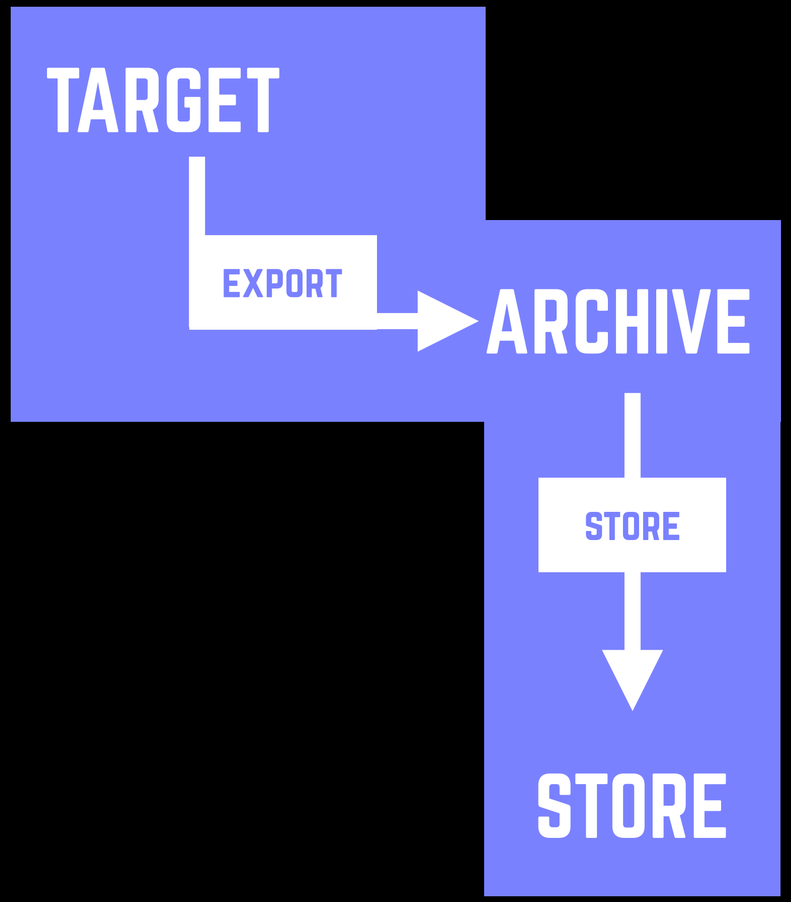

TARGET
EXPORT
ARCHIVE
STORE
STORE
RETRIEVE
ARCHIVE
IMPORT
RETRIEVE
ARCHIVE
IMPORT
RETRIEVE
ARCHIVE
IMPORT
RETRIEVE
ARCHIVE
IMPORT
TARGET

“TEST CASE DATA”

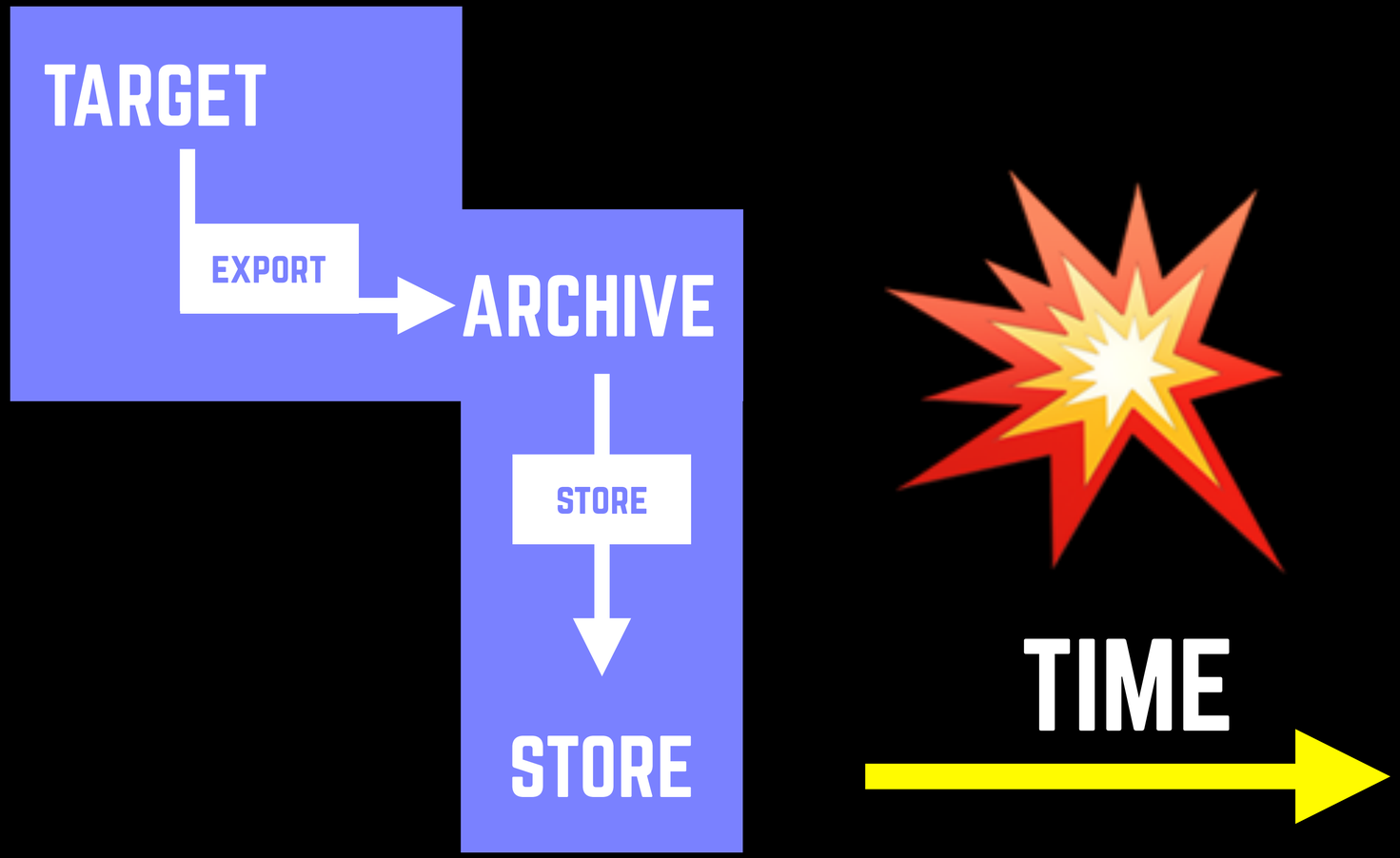


DO NOT DO THIS IN PRODUCTION

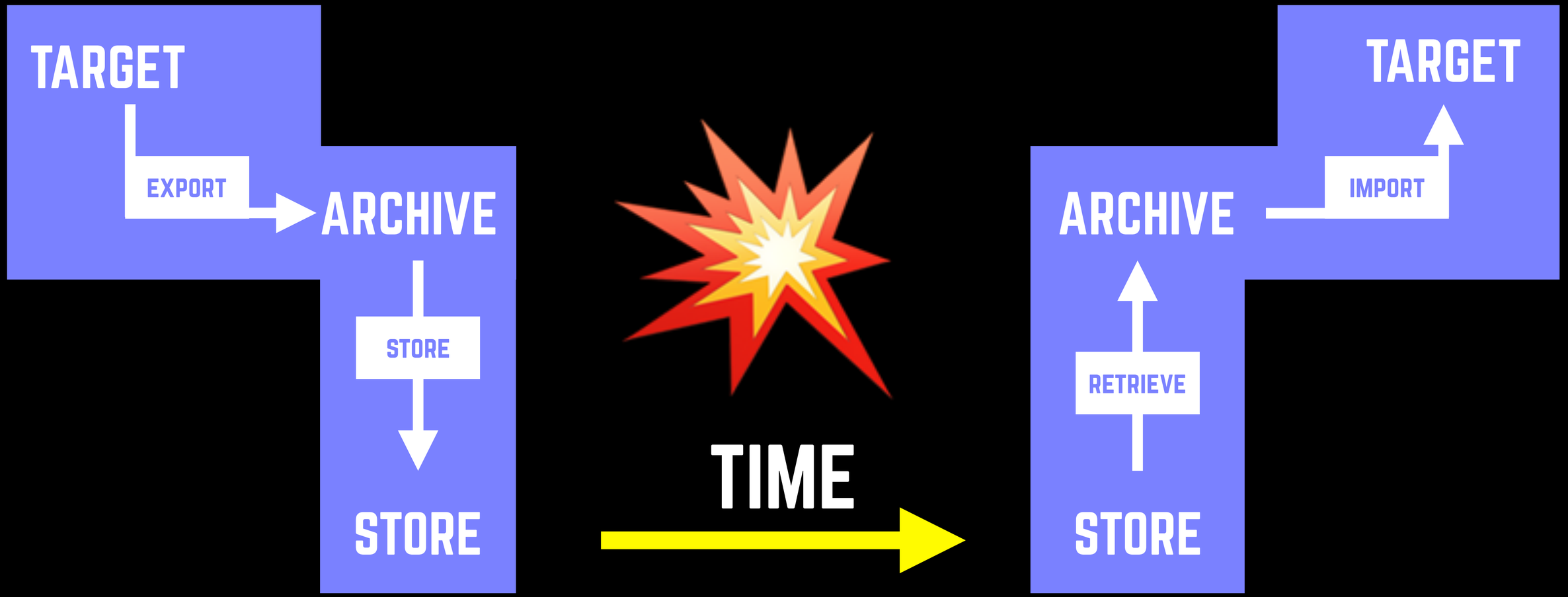
“DISASTER RECOVERY”



“DISASTER RECOVERY”



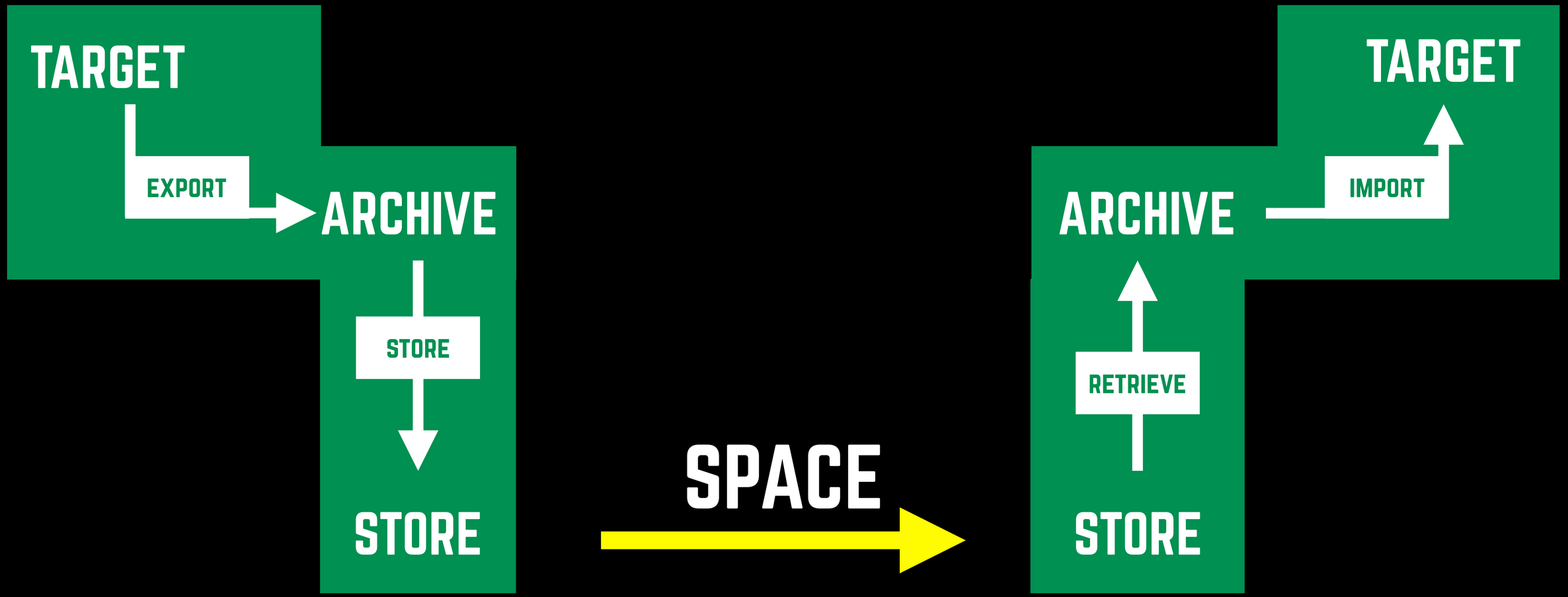
“DISASTER RECOVERY”



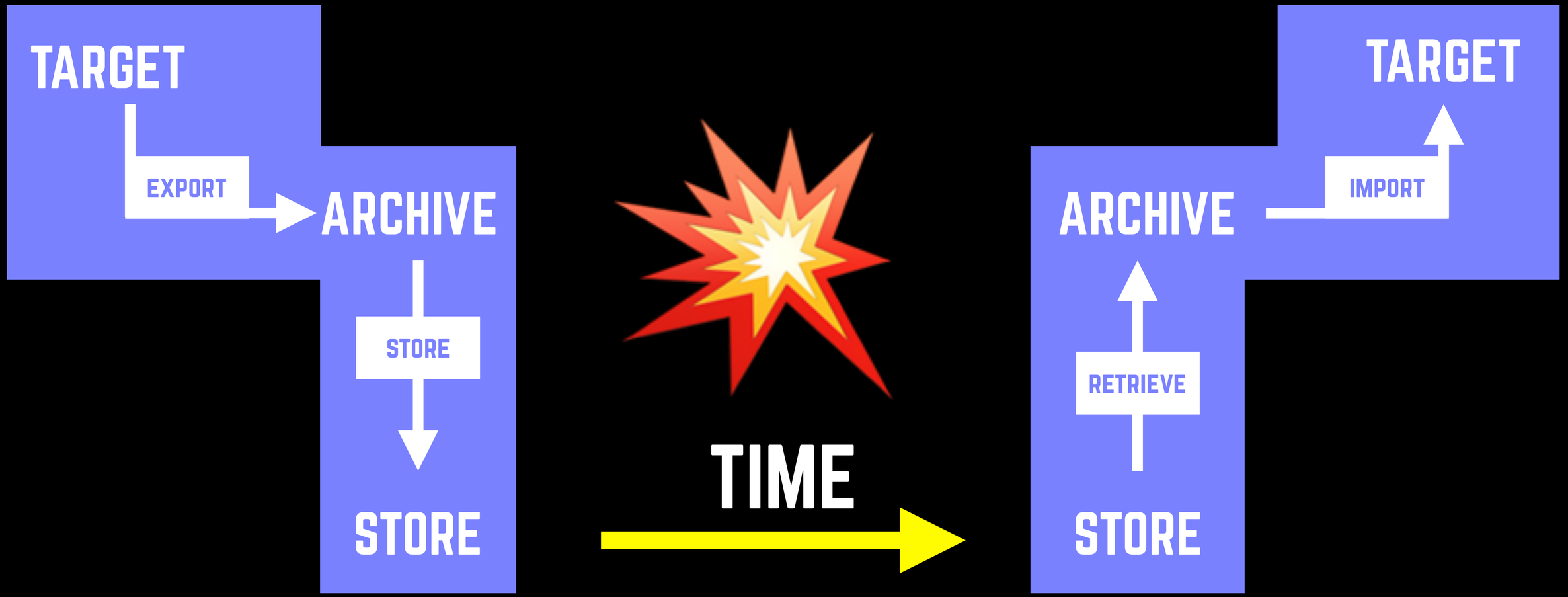
“DATA MIGRATION”

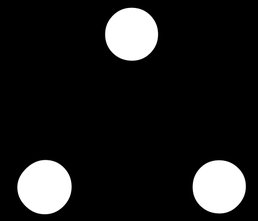
“DATA MIGRATION”

“DATA MIGRATION”



“DISASTER RECOVERY”



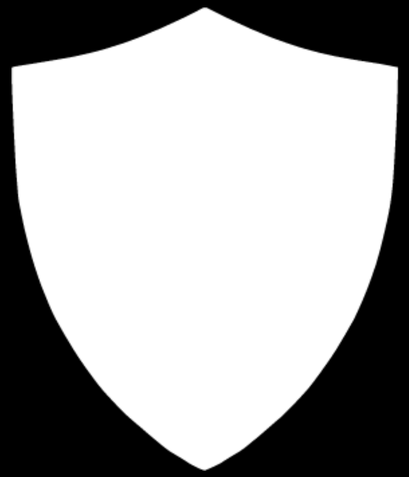


IF YOU SCHEDULE IT:

DATA MIGRATION

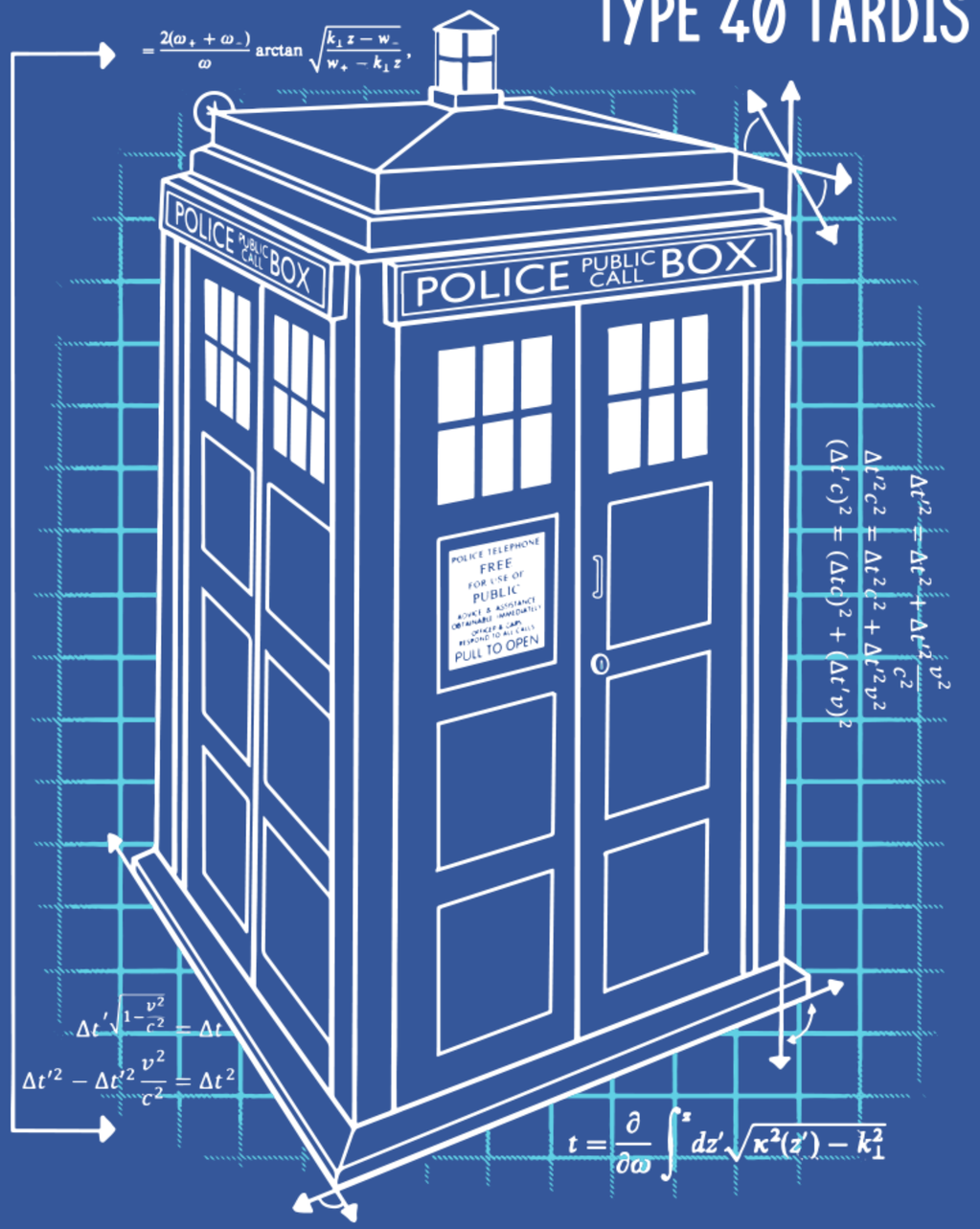
IF YOU DON'T:

DISASTER RECOVERY

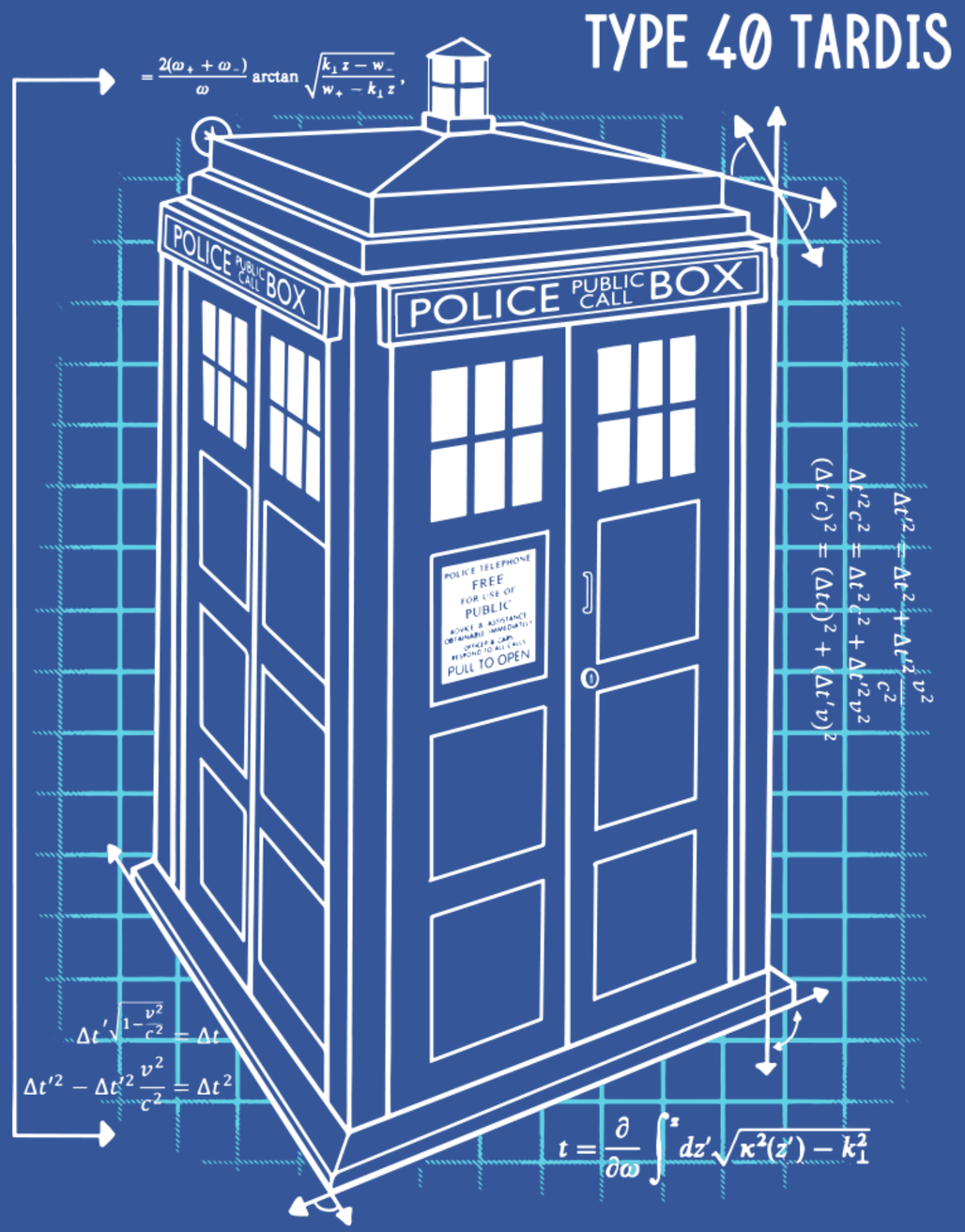


SHIELD
DATA PROTECTION

SHIELDPROJECT.IO


TYPE 40 TARDIS
POLICE PUBLIC CALL BOX
POLICE PUBLIC CALL BOX
POLICE TELEPHONE
FREE
FOR USE OF
PUBLIC
ADVICE & ASSISTANCE
OBTAINABLE IMMEDIATELY
OFFICER IN CHARGE
RESPOND TO ALL CALLS
PULL TO OPEN
$= \frac{2(\omega_+ + \omega_-)}{\omega} \arctan \sqrt{\frac{k_\perp z - w_-}{w_+ - k_\perp z}},$
$\Delta t'^2 = \Delta t^2 + \Delta t'^2 \frac{v^2}{c^2}$
$\Delta t'^2 c^2 = \Delta t^2 c^2 + \Delta t'^2 v^2$
$(\Delta t' c)^2 = (\Delta t c)^2 + (\Delta t' v)^2$
$\Delta t' \sqrt{1 - \frac{v^2}{c^2}} = \Delta t$
$\Delta t'^2 - \Delta t'^2 \frac{v^2}{c^2} = \Delta t^2$
$t = \frac{\partial}{\partial \omega} \int^z dz' \sqrt{\kappa^2(z') - k_\perp^2}$

THANK YOU



TARDIS
TAR.GZ

THANK YOU