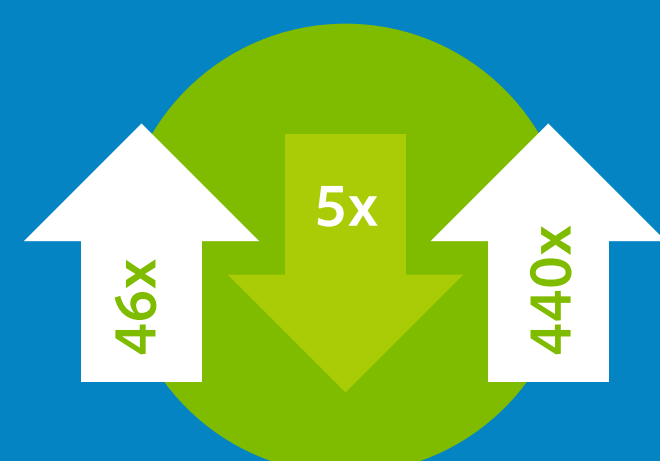




# Building Out the Ops of DevOps for Db2 for z/OS: Database Change Management

## Moving to DevOps



DevOps organizations can deploy code 46x more frequently and 440x faster with 5x fewer failures

(source: 2017 State of DevOps Report, DevOps Research & Assessment)



DevOps improves the quality of software deployments

(source: 2013 State of DevOps Report, ITPro Today)



62% state that DevOps improves collaboration and breaks down silos

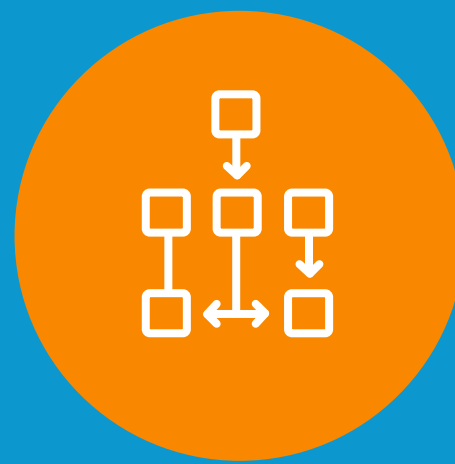
(source: DZone's 2019 Guide to DevOps)



However only 14% have incorporated daily deploy database change deployment.

(source: 2018 Database DevOps Survey, DBmaestro)

## Key Factors for DevOps Success



Cross-functional teams and support from leadership.

(source: The Current State and Adoption of DevOps, Dr. Elliot King, Research Analyst Unisphere Research)



Deployment patterns for building applications and reuse of services

(source: The 5 Foundational DevOps Practices: How to Establish and Build Them, Puppet and Splunk research document)



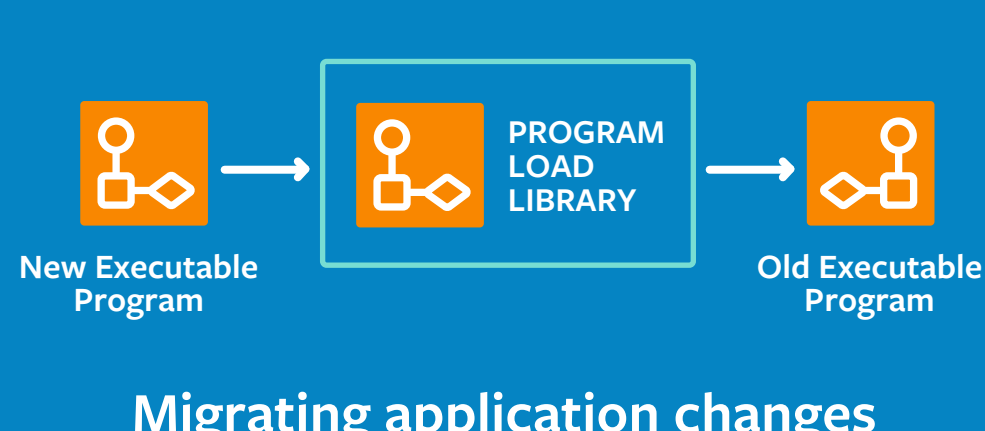
Incorporate databases into DevOps

(source: The Current State and Adoption of DevOps, Dr. Elliot King, Research Analyst Unisphere Research)



Automate using tools (like BMC AMI for DevOps) to improve accuracy and speed.

## Changing the Application is different than changing the Database

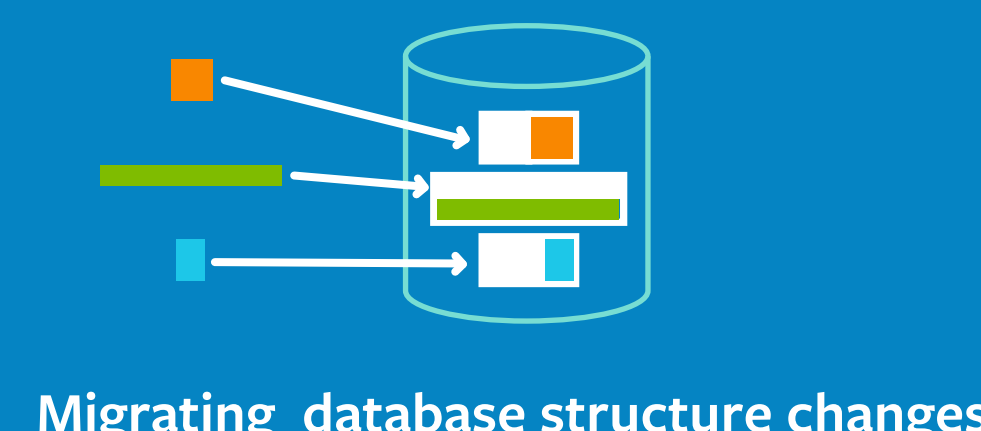


Migrating application changes

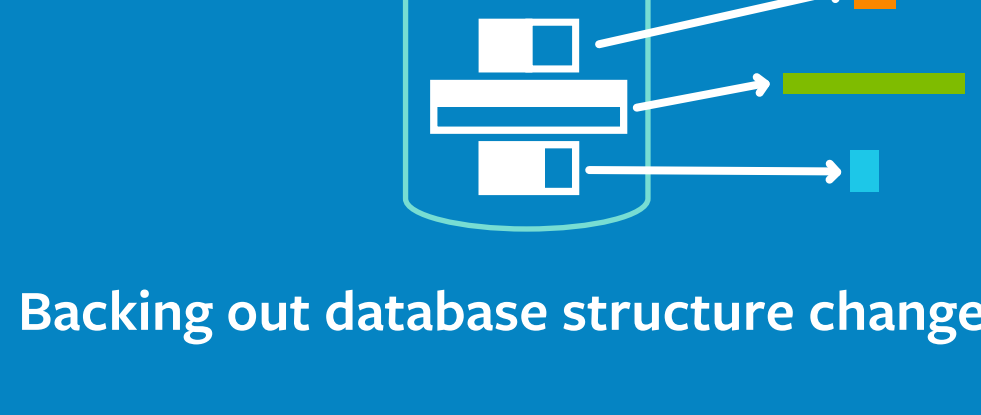


Backing out application changes

Application changes are made by moving a new executable module from one environment to another. Backout is simple.



Migrating database structure changes



Backing out database structure changes

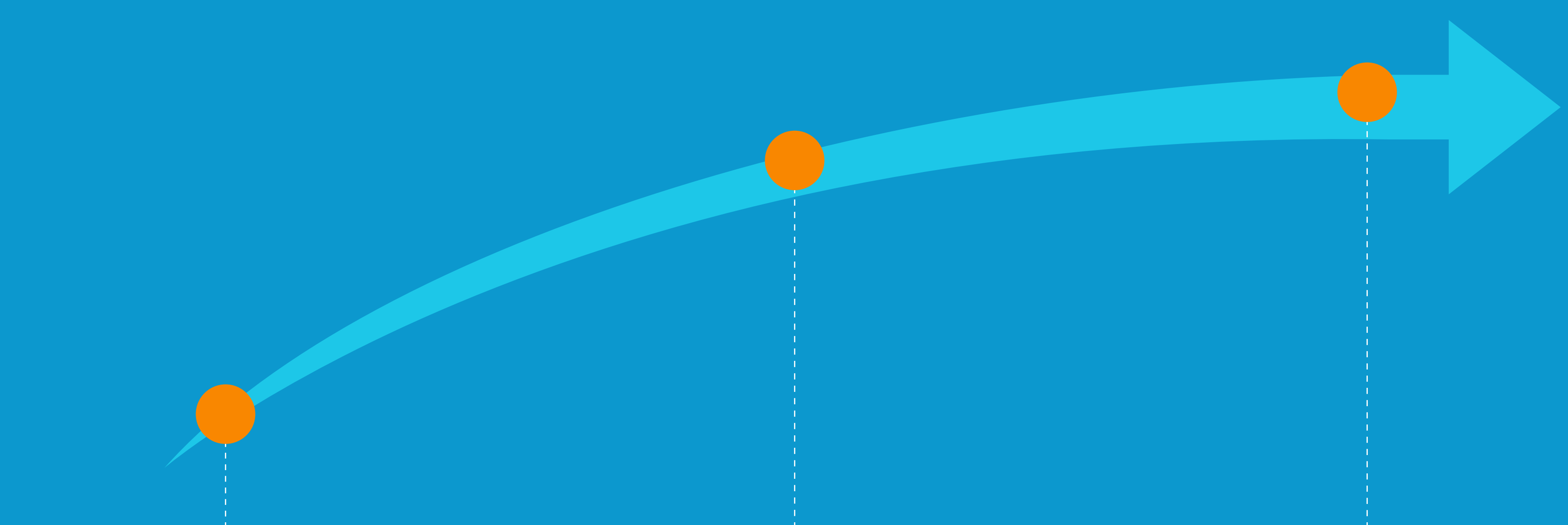
Database changes can be complex, made by modifying an existing installation of the DBMS. Backout is just as complex.



Db2 Database Objects

There are two dozen database object types in Db2 for z/OS

## There are three different ways that Db2 database structures can be changed



### Immediate

changes are simple and can be implemented immediately upon request.

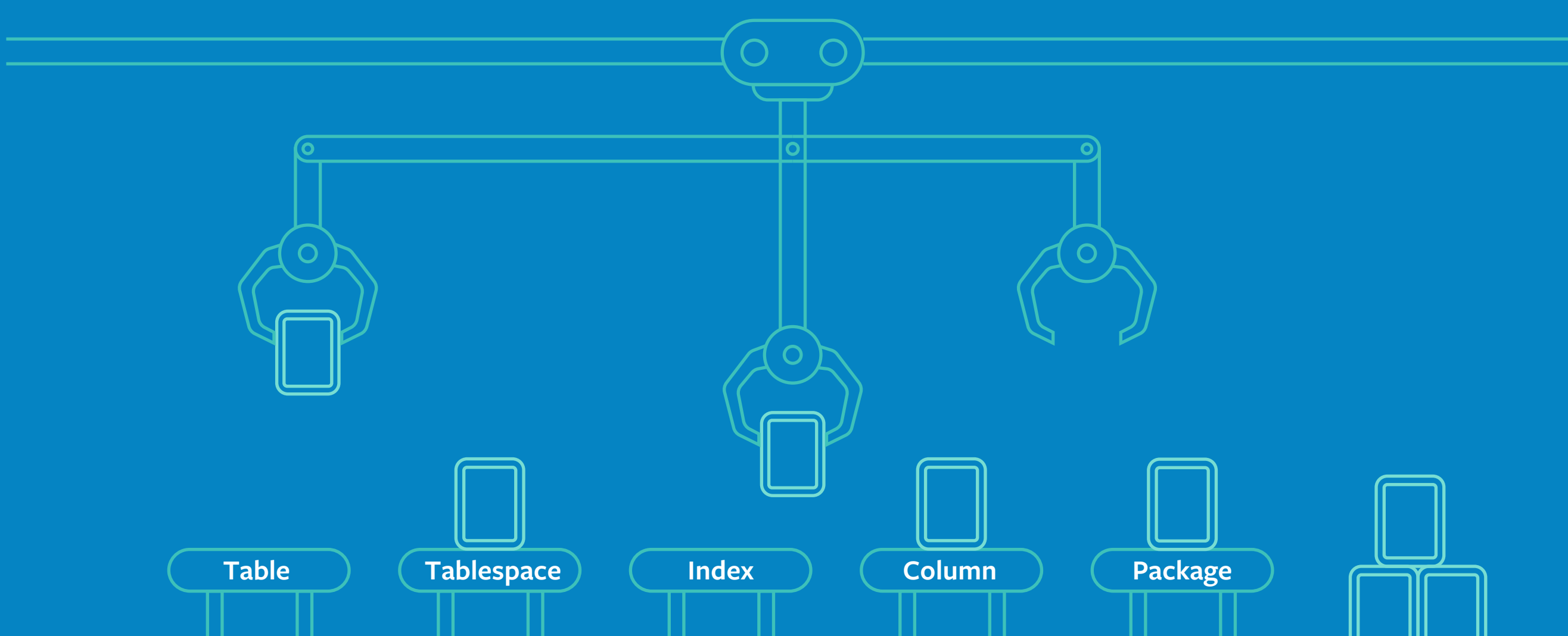
### Pending

changes are more complex and rely on Db2 versioning to implement.

### Complex

changes are very complex and require DROP and re-CREATE to implement.

## Automated mainframe intelligence required to ensure successful Db2 for z/OS DevOps



With two dozen database object types objects that can be changed (where each specific change can encompass multiple automation) using perhaps three different methods of change depending on the circumstances, intelligent automation is required to assure accuracy and to move at the required speed of application change

Speed up your application changes by automatically integrating mainframe database changes into your agile application development process.

Go visit BMC AMI DevOps for Db2



### About BMC

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