

# Databases: The anchor in the CI/CD Process

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# Driving Quality

- Database changes viewed thru the lens of Quality
  - Quality → “Flawless”
    - Functional
    - Repeatable
    - Reliable/Stable
    - FAST!



# Triathlons

- 3 Stage Athletic Event
  - Swim
  - Bike
  - Run
- A need to get help to go faster
  - Speed, Reliability, Repeatability



*Just like the swim was my Achilles Heel, the database can be the Achilles Heel of the SDLC*

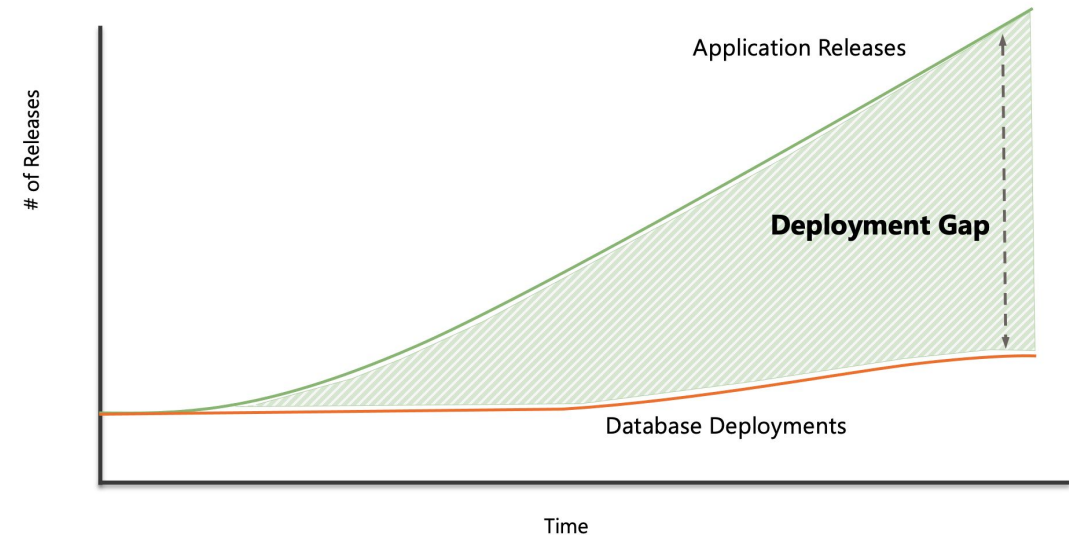
# Is it about the Database then?

- Problem
  - Dissatisfaction with the database
  - DBAs are left out
- Solution
  - Recognize the existence of an issue
  - Invite DBAs to the DevOps party
    - And tell them WHY



# WHY?

- Why bring CI/CD & DevOps to the database?
  - The Deployment Gap is growing
    - Application code deployment vs Database code deployment
    - Database releases become the bottleneck
  - It's time for a different solution
    - Treat database code just like app code



# Liquibase

- Open source database migration tool
- Easy & effortless way to track, manage, version & deploy database changes
  - Flexible Schema Change
  - Auto generated scripts
  - Repeatable Migrations
  - Integrations & Extensions
  - Rollbacks
  - Real Time Monitoring & Visibility



**Liquibase.org**

# How does this help?

- Quality
  - Database deployments will be -
    - More Reliable
    - More Repeatable
    - Faster
    - Functionality





# Elevate the Database *AND* DBAs

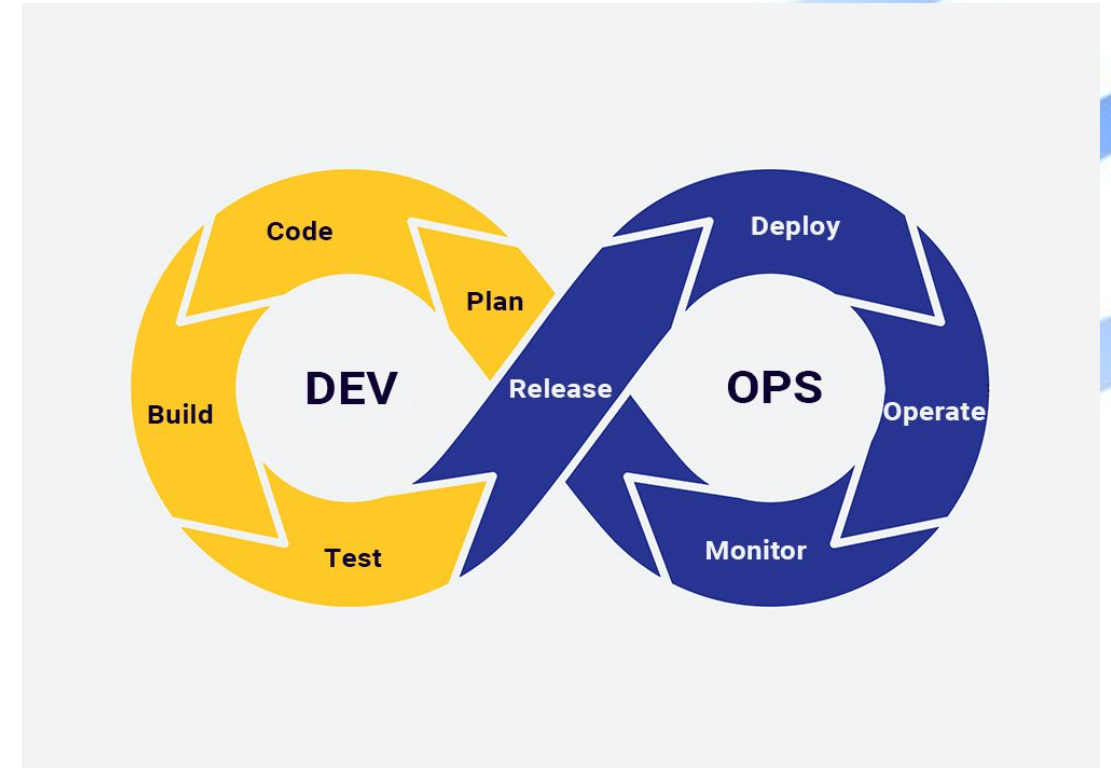
- DevOps for the database is the vehicle for qualitative database changes
- DBAs have a critical role to play in good quality software.
  - Using database migration tools like Liquibase allows DBAs to offload manual work
- Shift Left
  - Share the workload and earlier in the SDLC
  - Add database automation change to the pipeline
  - Free DBAs time to perform more critical tasks





# Emphasis

- Automation is essential
  - DevOps & CI/CD is essential
  - Applying this to databases will -
    - Decrease risk
    - Increase repeatability
    - Increase visibility + transparency
    - Share workload outside of DBAs
    - Allow DBAs to focus on higher level responsibilities
- Quality is a very important end goal
  - Database automation via DevOps & CI/CD is the vehicle to get us to a qualitative destination



# Liquibase Demo

Robert Reeves, CTO of Liquibase will showcase database migration automation using Liquibase

End