

JPMORGAN CHASE & CO.

# From Months to Minutes: Modernizing Database Technology at JPMorgan Chase

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# Introduction



# Reminders



# JPMorgan Chase Scale



# Databases as a growth market



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## From one of our key customers

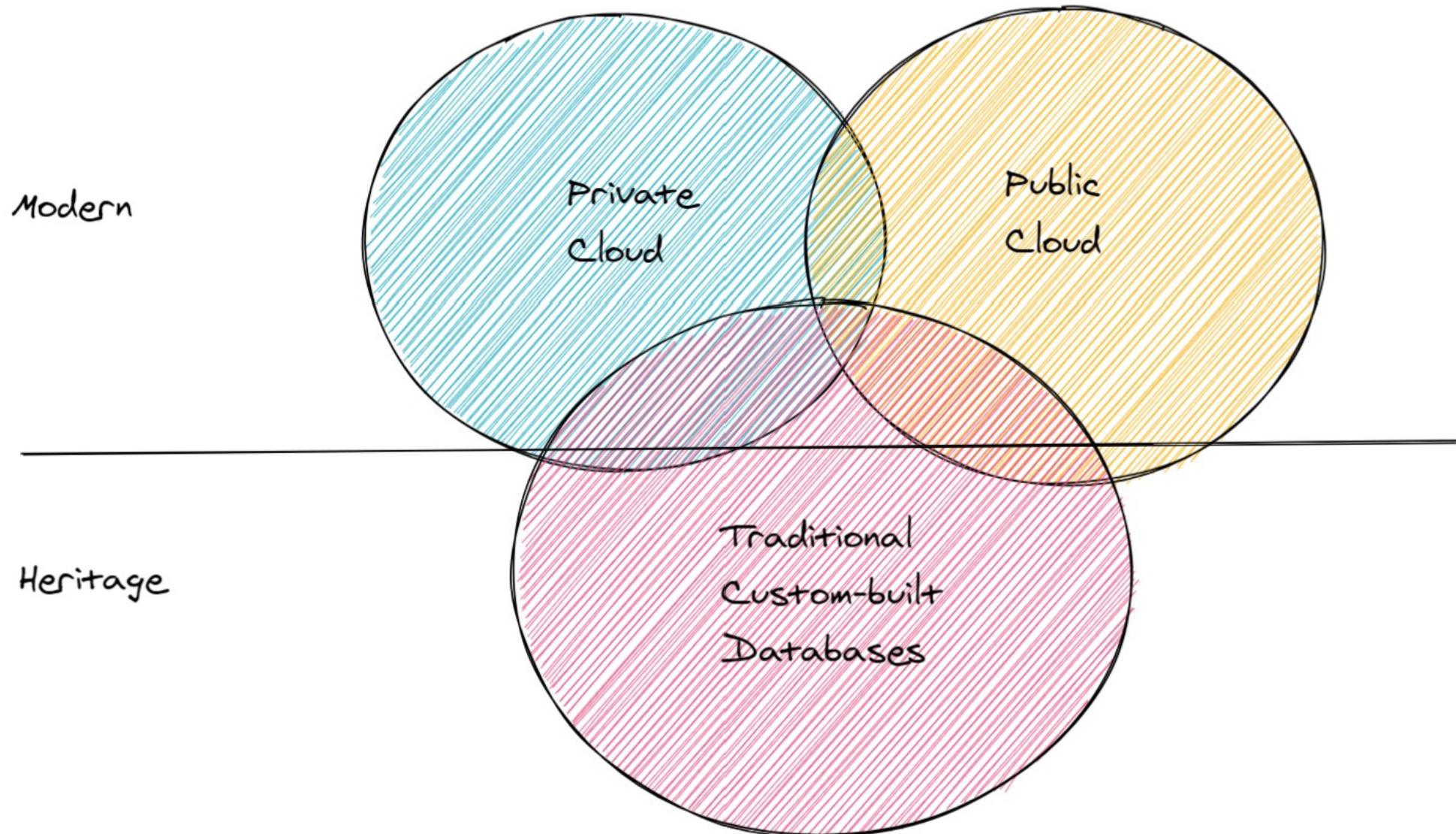
*"We recently went live on a modern document database platform, with a new data format, and refactored Transaction and Query layers with new indexing patterns. Multiple UI and backend components were updated to use this new database platform.*

*We migrated millions of documents during this effort with the outcome that we improved data search performance by 85%, and transactional data creation and update times by 50%.*

*Our partners in the cloud database team were a key part of this effort. Together we've delivered a significantly upgraded experience for the firm's customers"*

*-- Harsh Benara - Managing Director, Global Head of Engineering  
Digital Document Services, JPMorgan Chase*

# Where we run our databases



# Modern vs. Heritage Databases



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# Why does database modernization matter?

*For one of our most widely used relational database engines, applications who migrated from a heritage database platform to a modernized cloud platform were 82% less likely to have a database-related major incident.*

# { Container {Content} }



# Controls

A photograph of several sailboats on a choppy, teal-colored sea under a dramatic, cloudy sky. The boats are small and white, with one having a green sail. The horizon shows a distant shoreline with buildings.

Challenges

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# Choosing a future database

In a style borrowed from the agile manifesto... while there is value in the things on the right, we value the things on the left more.

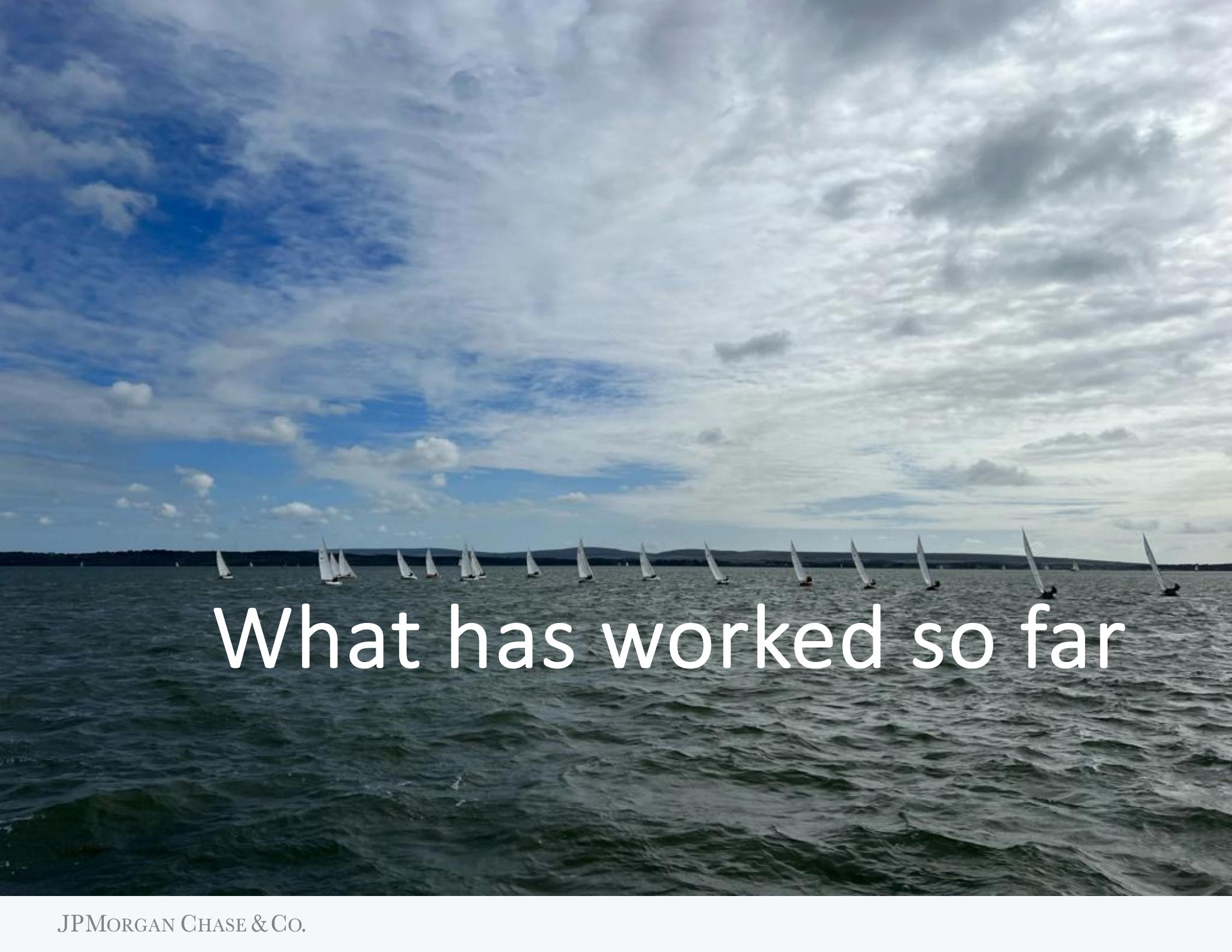
Open-source over commercial

Cloud-portable over single-cloud

Resilience built-in vs resilience as via 3<sup>rd</sup> party add-ons

Cloud-managed and SaaS over self-managed DIY platforms

Smaller set of excellent products over a wider selection with lesser quality

A wide-angle photograph of a lake under a dramatic, cloudy sky. In the distance, a long line of sailboats is visible on the water, stretching across the frame. The water is slightly choppy with small waves.

What has worked so far

# Where we started

A photograph of a sailboat race on a large body of water. Numerous small sailboats with white sails are scattered across the dark green, choppy water. The sky above is a mix of blue and white, filled with various cloud formations. In the foreground, the white sail of a boat on the left has a red vertical stripe near its base. A yellow buoy is visible in the bottom left corner.

Help we are looking for



# Thanks!

