



# A Bridging System Architecture

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Bridging System Architecture by Example

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Lesson Learned

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Q&A

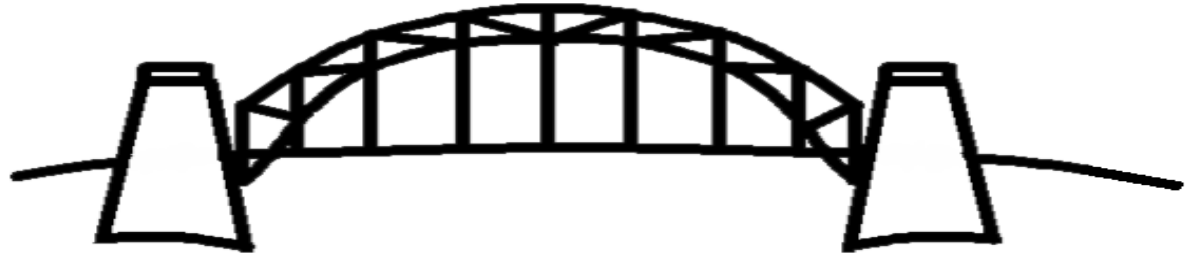
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# What is a Bridging System ?

## Definition of Bridging System

A Bridging System is a home-grown solution to route traffic to either new or legacy system during data migration

The bridging system is usually used to support Technology Transformation



It supports Mergers and acquisitions (M&A) such as consolidation of multiple Order Management Systems

It supports core business transformation that involves large Billing System Transformation

It is across industries such as telecom, transportation, and consumer products distribution

The bridging system is to minimize the impacts of system downtime and to make the system transformation seamless to end users during data migration.

# Bridging System Solution Approach

## UI level Bridging

- Search portal (web, kiosk etc) invokes bridging API and looks up customer and redirects to appropriate UI based on the customer belonging to new or legacy systems

## API level Bridging

- Enables API requests from partner applications' UI to efficiently locate and route the requests to the appropriate backend new or legacy systems
- Service looks up bridging database and invokes appropriate backend call to route the messages to new or legacy systems

## File level Bridging

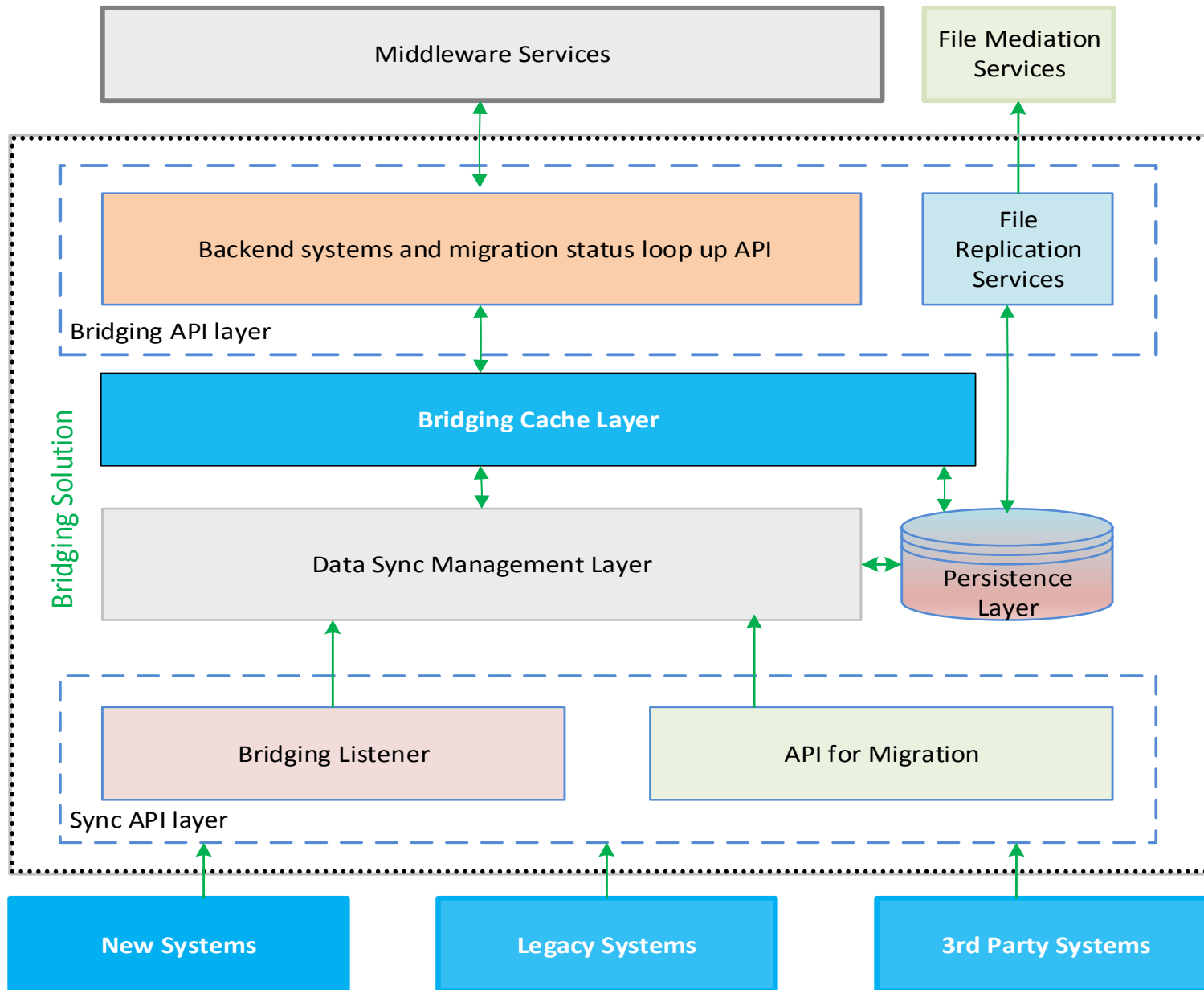
- Enables routing of file (offline, batch, or near real-time process) transmitted by external systems to the appropriate new or legacy systems at backend

## Migration

- Provides a Migration API for updating Migration status in bridging database
- Enables tracking of latest migration status and customer location through the migration process













# Bridging System Architecture by Example



# Why Do-It-Yourself (DIY) Bridging System?

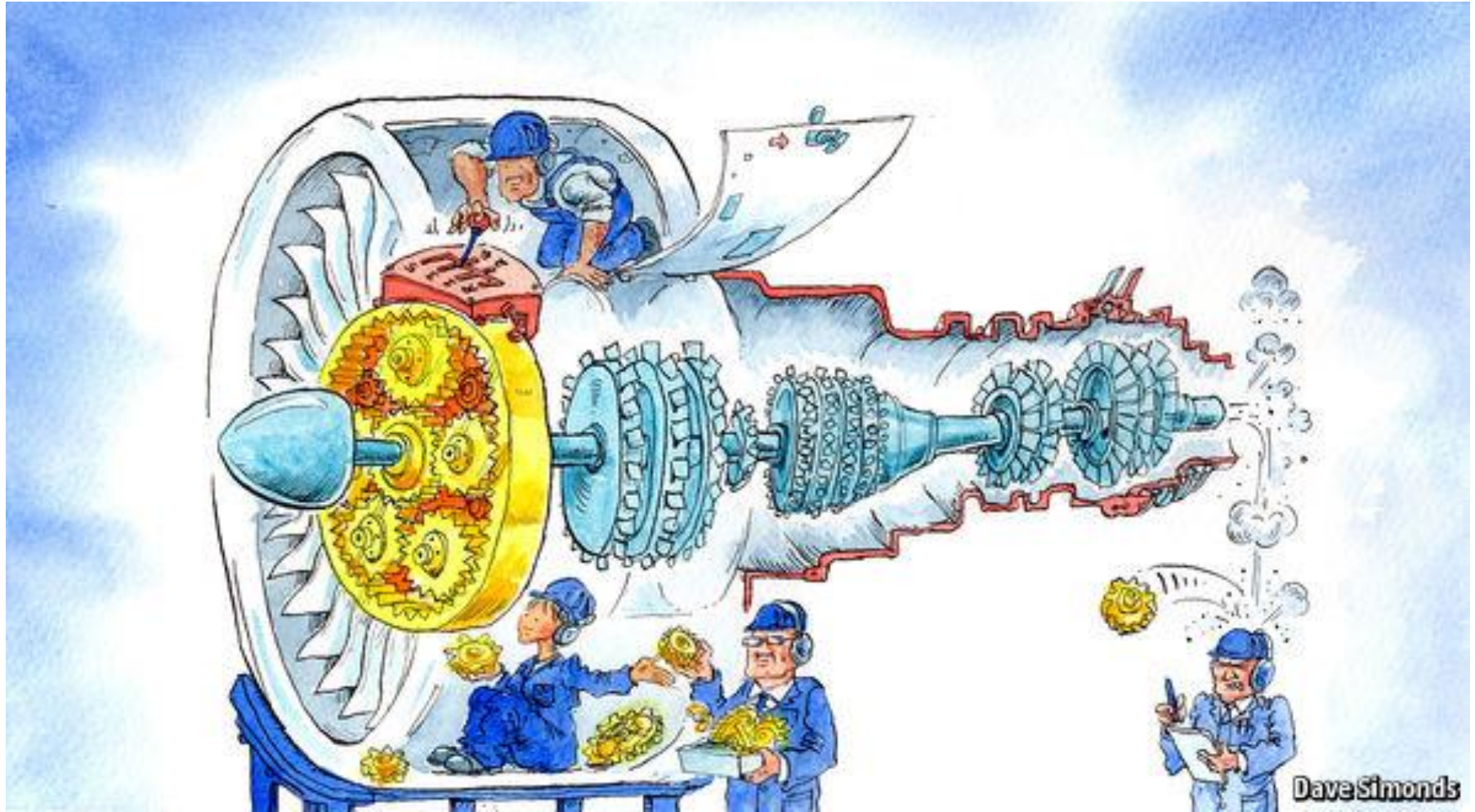
The business dynamics and challenges to architect a bridging system to not only support data migration, but also serve data segmentation to support Active/Active data center model after the data migration is complete increased the needs for DIY.

Business Level	Technical Level
 Impact on data migration models	 Minimize proliferation and leverage to support data segmentation
 Balancing cost-cutting with investment	 Maximising reach through systems
 Flexibility to satisfy business dynamics	 Create once, plug-in many multiplatform productions
 Transparent and no impact to customer experience	 Scalable for migration span increases
 Increase collaboration between business units	 Flexible enough to accommodate migration schedule changes



# Architectural Dynamics and Challenges

*A quieter, more economical jet engine, fitted with a gearbox, is about to arrive!*



# Architectural Dynamics and Challenges

## Challenges

- *Minimized proliferation of bridging components while leveraging bridging infrastructure for supporting data segmentation and active / active functionality*
- *Keep the persistence robust without hiccups*
- *Performance to keep up the data volume for Bridging API layer (north bound) and Data Sync layer (south bound)*
- *The restriction of no change or minimal change to the legacy systems*
- *Integration of impacted applications that need to query Bridging DB via Bridging API or sync its data to the Bridging DB.*

## Dynamics

- *The change of data migration landscape including the scope, methodology, approach, and execution*
- *On-going new system implementation and legacy systems maintenance related development*
- *Scalable in case migration span increases*
- *Flexible enough to accommodate schedule changes of impacting initiatives*
- *Perception of using Bridging database as a dump yard*
- *The confusion of Bridging data reconciliation and Accounting related reconsolidation among business stakeholders*



# Lesson Learned



## ***Communication***

***Tap into the landscape of new and legacy system architecture and impacted applications***

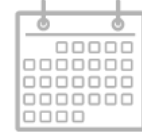
- Understand the architectural restrictions and the impact to the data migration and performance
- Weigh options and trade-offs to satisfy business needs in terms of end-user experiences, system cut-over readiness and timeframe
- Ensure business stakeholders fully understand the potential revenue impact for short term and long term



## ***Plan***

***Plan for every aspect of stability, scalability, and flexibility for the architecture***

- Architecture decision needs to be vented out and each component needs to be prototyped and fully tested based on technical stack
- Architecture board or committee needs to leverage Sr. leadership in the planning process and seek support for the architectural blueprint
- Plan early and play smart. A backup plan is always needed



## ***Execution***

***Measure the effectiveness and limits of the a defined Bridging architecture through execution***

- Infrastructure building for the Bridging system including hardware procurement needs to start as soon as the architecture draft is complete
- Measurement and acceptance criteria need to be defined at both business and technical levels
- Network configuration, security, and latency can impact the Bridging system performance

Questions?

Thank You



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