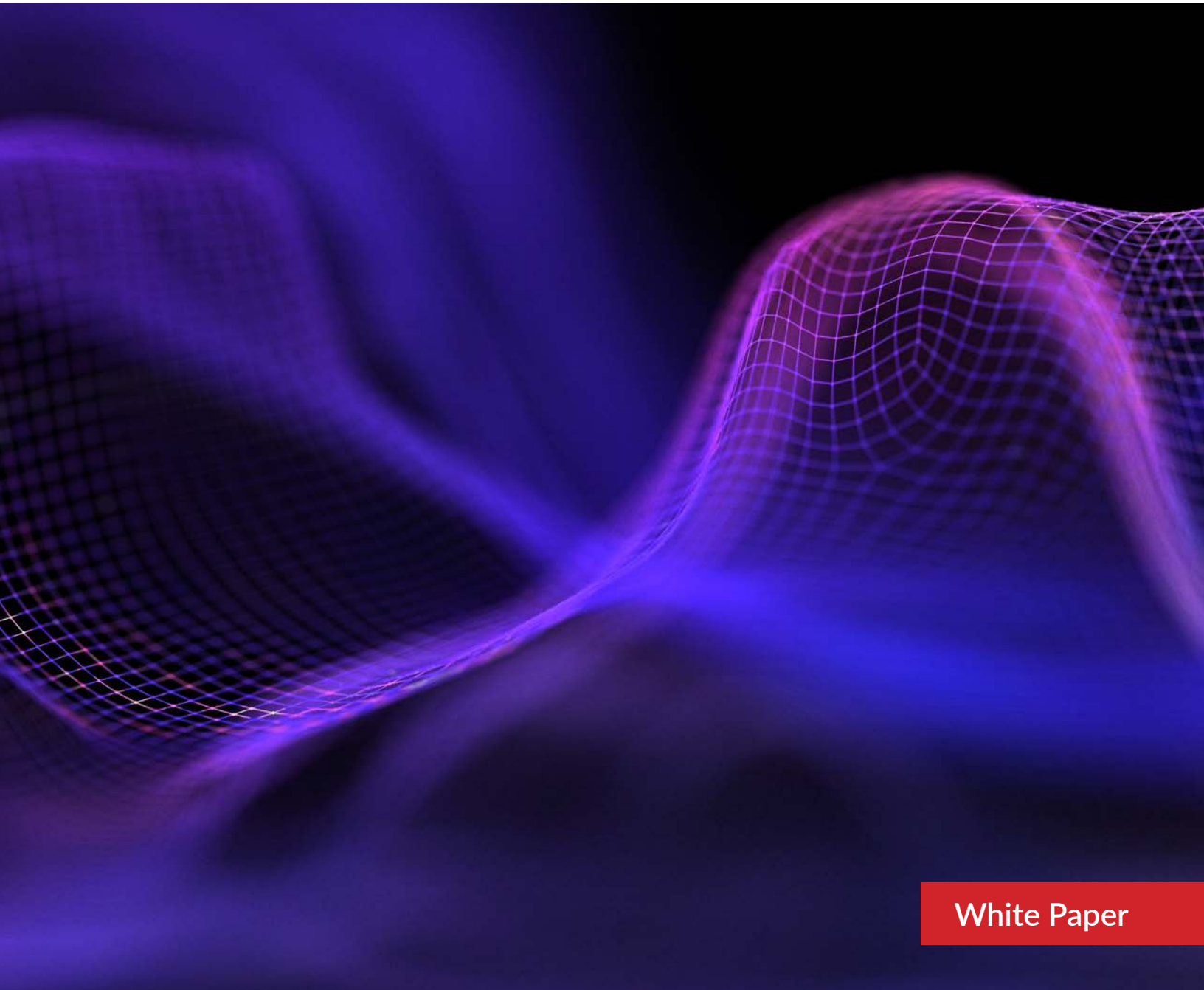
Integration
Mobilization
Unification

From Legacy to Leading Edge

ADAPTIGENT

Integrate to Innovate:

How APIs Fuel Success in Mergers and Acquisitions



White Paper

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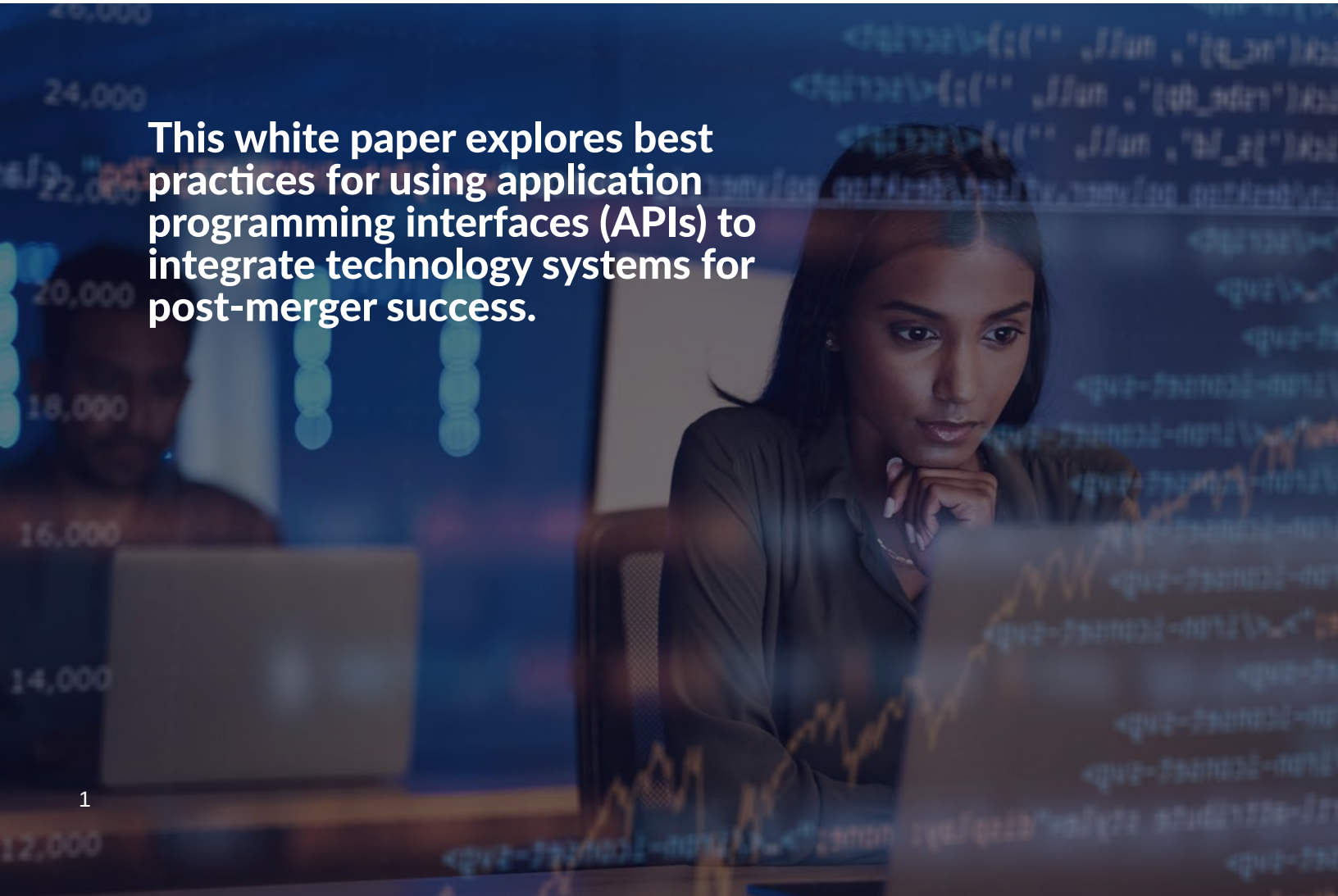
APIs for Smoother Mergers and Acquisitions

Executive Summary

Mergers and acquisitions (M&A) are predicted to increase as Artificial Intelligence disrupts companies and the global economy[1]. When companies merge, effective technology integration can act as a force multiplier, giving business units access to new customer data, more effective systems and streamlined workflows that make employees more productive and efficient.

Likewise, without consideration, the differing technology stacks, data inconsistencies, security concerns, and cultural differences can cause the value of a merger to plummet. Failure to plan sufficiently for technology ranks among the top 10 reasons for a failed merger[2].

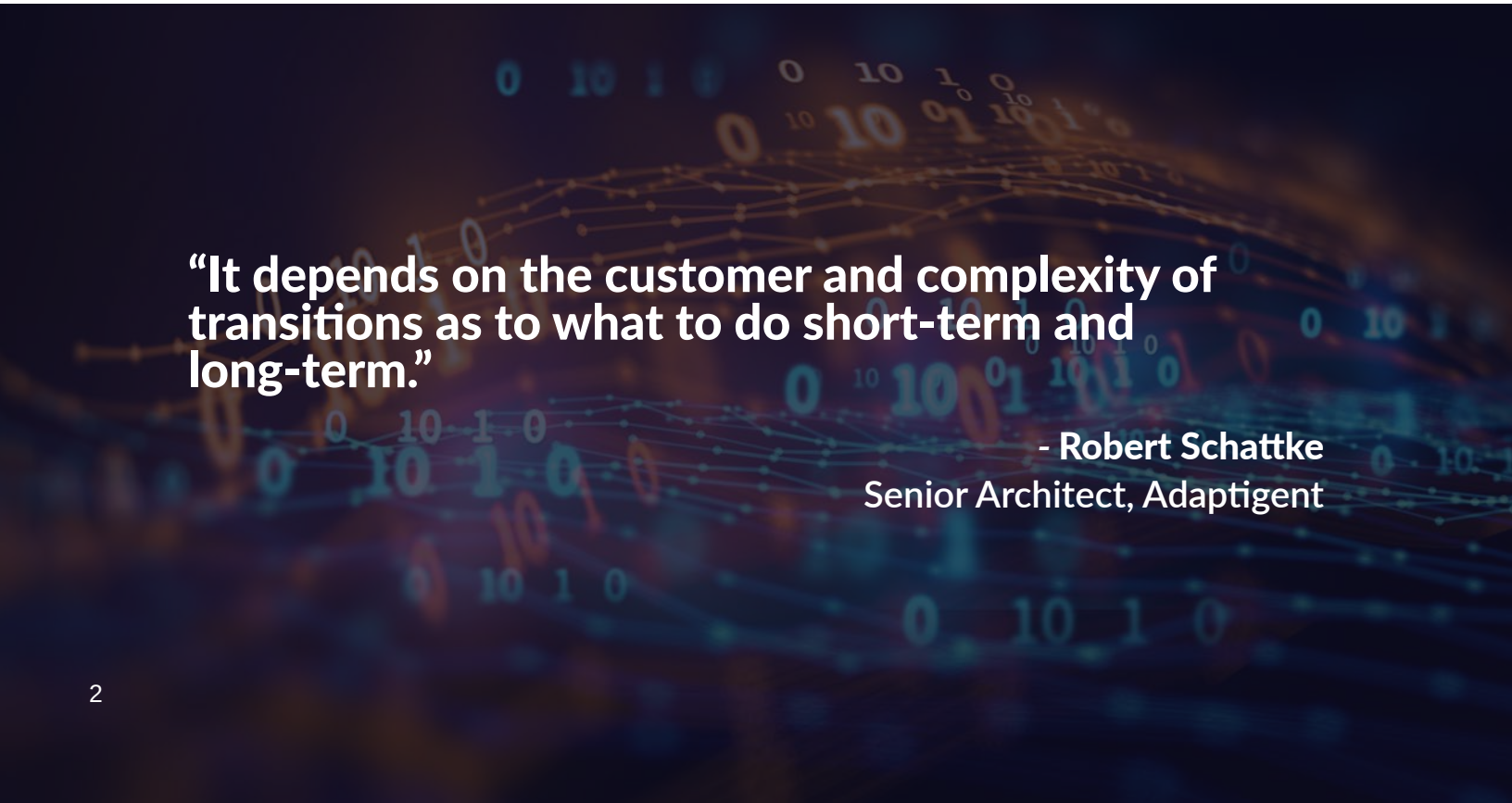


This white paper explores best practices for using application programming interfaces (APIs) to integrate technology systems for post-merger success.

Core Systems Integration Challenges

The challenges of core systems integration are numerous. The goal of APIs in a merger is to mask the differences and complexities of multiple backend systems by building a common frontend. This eliminates the immediate need to figure out how to combine multiple systems.

One call may branch off into multiple branches or multiple systems, depending on the underlying base process. Human resources may use a different system than the maintenance facility, which uses a different tech stack than the warehouse logistics team. M&A technology process owners need to understand what exists, what and how systems are already connected, and discuss potential hurdles - before, during and after a merger.



“It depends on the customer and complexity of transitions as to what to do short-term and long-term.”

- Robert Schattke
Senior Architect, Adaptigent

API Strategies

Acknowledging that few individuals – if any – have a breadth of knowledge encompassing every system and application in use across an organization, we recommend that companies consider API strategy options and diverse teams. There are four major approaches: integration, status quo, replacement, or hybrid. Any combination may be beneficial.

Replacement - Migrating data from both companies' existing systems to one, new system. This option can take years to implement, is disruptive to companies and has a high risk.

Hybrid - Migrating data from company A into company B's tech stack. Employees and partners from one company would need to learn new systems. It's less disruptive than full replacement, but not necessarily smoother or quicker.

Status quo - Maintaining siloed systems. This requires the least amount of time. M&A teams must consider internal and external stakeholders, especially the human factor of available resources to run duplicative systems and for what duration.

Consider a merger between two global companies. Integration teams must consider if it's realistic to train and convert 20,000 retail sites to a new system. It may never be worth switching.

Integration - The final strategy option involves connecting systems on the backend using APIs. All employees experience the look and feel of their familiar systems, but APIs do the hard work. With this, IT modifies the behavior of the resources to combine data from both companies' systems without forcing one unified system. This could be a short-term solution or a long-term plan.

API Benefits

"If there is a critical infrastructure element that provides maximum leverage during your M&A cycle, the API layer may be it[3]."

- **David Feuer**, Chief Product Officer, Galileo Financial Technologies

We strongly recommend using APIs for M&A integration for the following reasons:

1. **Eliminate data silos** - APIs ingest data from applications regardless of where data resides — on-premises, the cloud or hybrid. A byproduct of breaking down silos is increased access so consumers can quickly find, prepare, and use data.

2. **Integrate efficiently** - In a merger, time is money. APIs enable swift and efficient connections of previously separate systems, allowing data and functionality to be shared without the need for complete overhauls. This streamlines integration and minimizes disruptions. In turn, this can provide rapid and reliable insights.

   Using a tool like Adaptigent Adaptive Integration Fabric expedites integration too. Fabric enables companies to rapidly and seamlessly connect modern IT ecosystems with core data and transaction systems. What used to take months or even years of coding can be done code-free in days or weeks.

3. **Preserve flexibility** - APIs provide a layer of abstraction that allows each entity to preserve its existing technology investments while still enabling data and functionality to be shared. By creating a standardized way for systems to interact, APIs ensure that the merged organizations can adapt to changing business needs and scale efficiently. They enable a full-picture view.

4. **Enhance user experience** - By integrating APIs, companies can leverage customer data and vendor data, enabling personalized interactions and a unified user journey. This leads to improved customer satisfaction, reduced friction, and a stronger competitive advantage. The post-merger entity can offer a consistent and seamless experience to its users – including its internal employees, clients and partners – regardless of systems origins.

How to Prepare for Integration

Internal Stakeholders

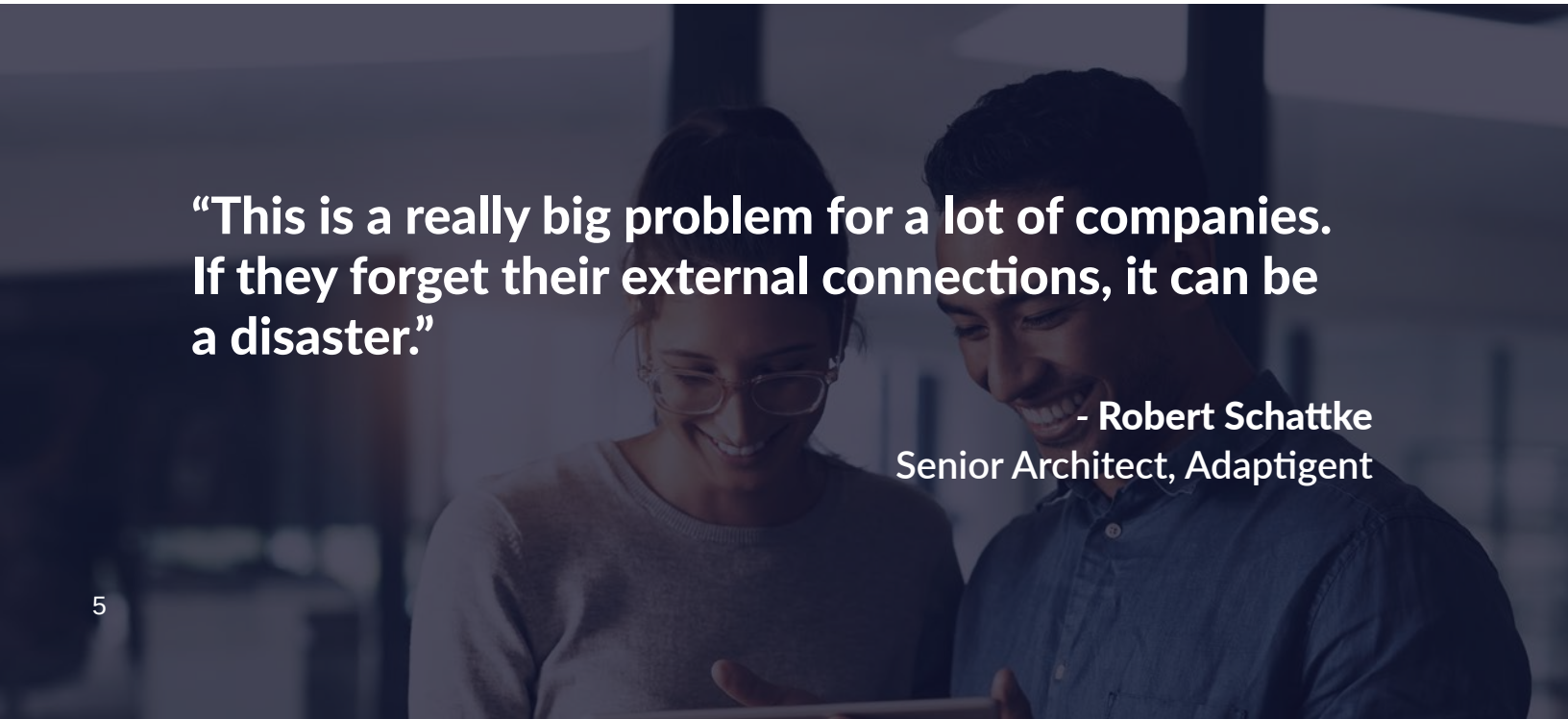
Neither merging nor creating systems happens overnight. Identifying key stakeholders means including developers, systems architects, human resources personnel, mainframe and cybersecurity representatives, non-technical users and executives. A robust set of representatives can accelerate progress and share responsibilities for integration. It can also help alleviate the number one concern that Directors and Chief Financial Officers have about achieving M&A success: integration failure[4].

Each company likely has existing APIs at work. Part of integration means evaluating the compatibility and functionality of internal APIs from both merging entities.

Partners & Client Stakeholders

Successful teams remember that the M&A also converts partner and client systems. Both companies merging need to take inventory of third-party and partners currently connected before moving or creating new pathways. The average company's network is accessed by 89 different vendors every week, according to a survey of 600+ IT decision makers[5].

Consider temporary bridges for some partners. For example, a warehouse management system run by an external company may not want to change over immediately. They might want a short-term project and a different timeline to integrate. APIs enable this flexibility.



"This is a really big problem for a lot of companies. If they forget their external connections, it can be a disaster."

- Robert Schattke
Senior Architect, Adaptigent

"There are almost always surprises when accessing client systems. We don't know all the ways customers use their existing datasets, logic and interfaces. Development teams don't even know who is doing what, when, or where. It often isn't documented, yet is vital to a working system."

- Moss Hays
Director, Product Development, Adaptigent

How to Build Successful APIs

APIs offer flexibility and value for integration. What should M&A teams consider when building and connecting APIs?

Collect Data - Before an M&A team makes any decisions, we recommend collecting and analyzing data. Consider an acquisition with six billing systems. Or a parent company with 70 sub-companies. How should teams decide which applications and systems to keep or sunset? There's likely no global visibility into what systems are performing which functions. An API works here.

Layering APIs - People underestimate the orchestration happening within systems. A program usually does one or two things, but not all at once. Accounting, marketing systems, parts inventory, warehouse systems – they all must connect. But it may not be sequential or the same sequence every time. How do mergers take that into account? They layer APIs. A tool like Adaptigent's Adaptive Integration Fabric can orchestrate decision-making processes.

Feuer adds, "The API layer provides a single source in the network for requests. Southbound interface infrastructure—behind the API management platform—can be more easily manipulated because traffic can be routed elsewhere without disrupting services. Changes behind the API do not mean downtime for the end-user services and experiences that rely on the API[6]."

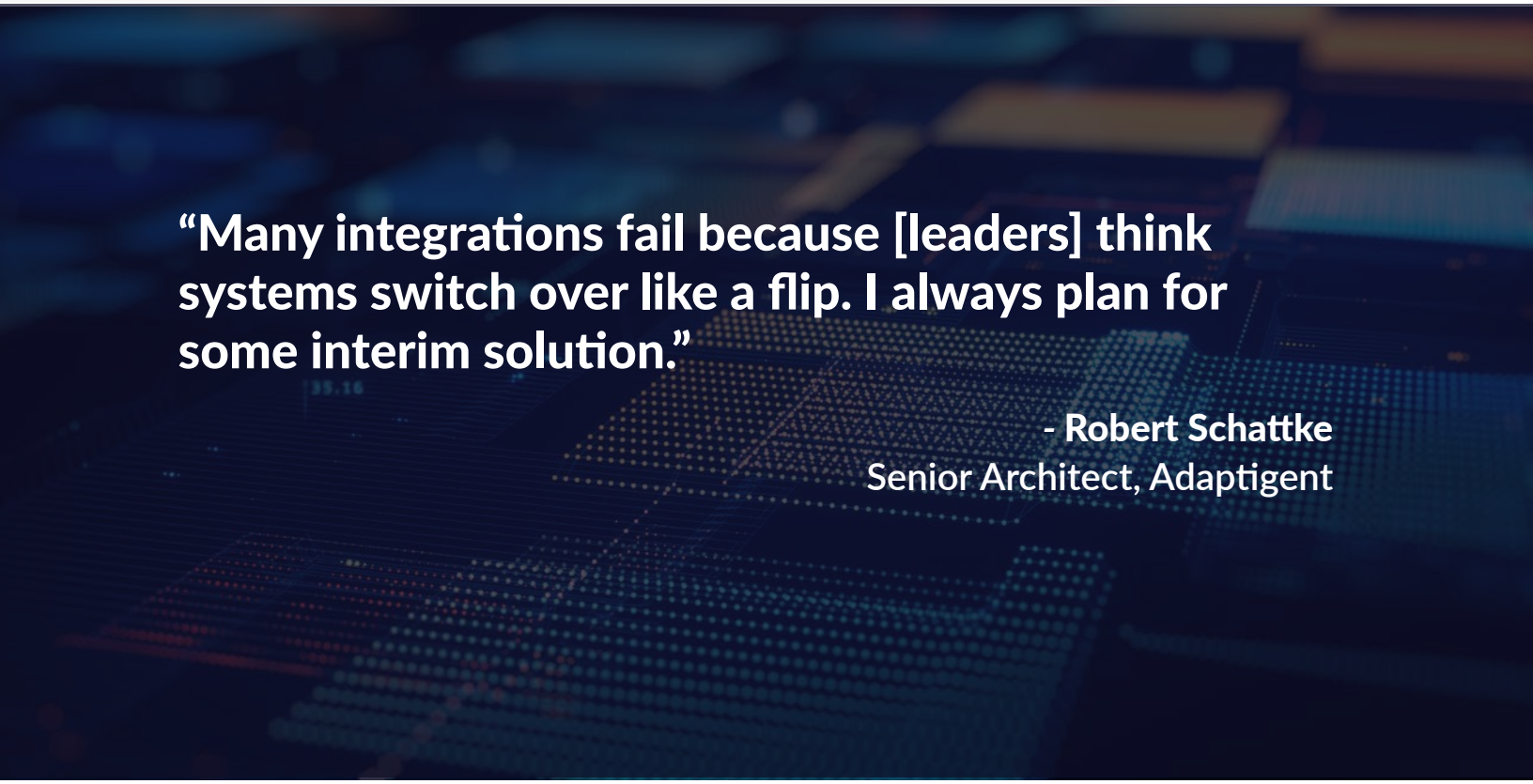
How to Use APIs for Search and Discovery

Companies must find ways to combine or consolidate technology. Yet without visibility into how infrastructure is leveraged, knowing how to effectively and profitably do so may be nearly impossible[7].

David Feuer, Chief Product Officer, Galileo Financial Technologies, shares how an API helped answer questions about functionality.

> **"Post-acquisition, I was part of a team looking at all the systems and 1500+ applications in use. No one knew what they did. But employees kept saying 'System X is super important.' No one wanted to touch it, but they also had no idea who was using it or for what. We didn't want to unplug System X and just see what happened.**
>
> **"Instead, our team added a fence-ring and used an API management platform to watch actual traffic in real time. We discovered that system X was used once a month, by one team, for a regulatory thing. We wouldn't have known without the API layer. We gained a lot of passthrough data to sort."**

Using APIs in M&A allows teams to be intentional about design and control over the infrastructure. That's not always true in M&A scenarios; often it's black boxes and blind corners[8].



> **"Many integrations fail because [leaders] think systems switch over like a flip. I always plan for some interim solution."**
>
> **- Robert Schattke**
> Senior Architect, Adaptigent

API versioning - Manage existing APIs and ensure backward compatibility. Teams must also clearly communicate the changes made to the API so consumers know what to expect from it.

Migration plan - Once data is collected and decisions about what to keep, retire and connect, the M&A team should build a plan to phase out legacy APIs and transition to new API integrations.

Architecture and design - It's easy to develop a project by adding functions until it works. The downside of this myopic focus on functions is a failure to consider the people using it. It's necessary to objectively test the usability of processes and connections we build.

“The success of a project is all subjective if our program isn’t usable. If it’s not convenient and the pain of using something is too much, it’s a waste and no one uses it. Think about how usable a product is, how easy it is to work with.”

- Moss Hays
Director, Product Development, Adaptigent

How to Address Security and Compliance

Organizations must prioritize robust security at all stages of an M&A. To increase the likelihood of an issue-free integration, both companies should conduct due diligence before a finalized deal, and include conversations about the role of APIs.

For example, with 71% of the Fortune 500 relying on mainframes to manage business-critical data, mainframe security programmers are stakeholders during security conversations. Enterprise systems on z/OS are not impervious to data hacks, despite a well-deserved reputation as the most secure platform.

When designing APIs that link COBOL and CICS backend systems to the outside world, the APIs can be made to bypass the RACF or ACF rules that make up the traditional mainframe security. Thinking about security during the design of these APIs is a part of the critical path to building a doorway into enterprise systems.

Security best practices can help mitigate API risks. These include:

- Implementing strong authentication and authorization mechanisms
- Regularly updating and patching APIs
- Encrypting sensitive data during transit
- Conducting thorough security assessments, such as penetration testing and code reviews
- Establishing comprehensive security protocols for integrating third-party APIs
- Ensuring ongoing monitoring to detect and respond to potential threats[9]

Feuer agrees: "As risks to your business evolve, new and flexible security options can be introduced, from authentication mechanisms that control access to APIs to machine learning algorithms that learn to identify bad actors based on API traffic patterns[10]."

"We develop APIs to make businesses function in real-time, which is what many customers want – even with the knowledge that every API can be a security exposure if poorly implemented."

- Lawrence Rondot
Manager, Customer Support and Enablement, Adaptigent

Case Study: Lessons from an Airlines Merger

Challenge: Merging two major airlines required massive systems integrations to shift aircraft maintenance from a manual paper and green screen process to one that provided real-time interaction with mainframe computers.

Additionally, the company sought to:

1. Move mechanics from green-screen systems and paper-and-pencil notes to hand-held devices accessible from anywhere.

2. Automate some previously manual processes. The airline knew they could reduce downtime of waiting if the service and maintenance manuals were digitized and inventory search automated.

The amount of data airlines produces and process daily is staggering. Using Fabric to successfully connect and manage the volumes of maintenance and service dat a across multiple systems supported a successful merger in multiple ways:

Safety - The correct plane part should go on the right plane. With comprehensive and updated records unified by Fabric, the airline can track the use of each seat cushion and button. Digitalization allows airlines to maintain parts traceability far more efficiently than paper-based processes.

Customer satisfaction - Handheld tablets accessing real-time mainframe data provide better visibility into team productivity and facilitate faster gate turnaround to improve on-time performance. The leading cause of late flights are airline-controlled processes, such as maintenance[11].

Efficiency - Planes undergo routine maintenance, and the new system offers insights to move plane parts to the right places. Airlines don't want planes to wait on the ground any longer than necessary. Every hour the aircraft is not in operation costs the airline operator an average of $10,000 USD[12].

Regulatory compliance - Every piece of a plane has a part number and a serial number. If an airline carrier accidentally installs one incorrect light bulb, and that plane flies routes for a week before the correct bulb is installed, there are fines for every leg of every flight for every incorrect part. A week easily produces $100,000 USD in regulatory fines.

Technology solutions

Adaptigent Adaptive Integration Fabric (Fabric) enabled the airlines to put an API on the front end of each green screen maintenance system to connect their applications. The applications then ran on tablets and the tablets could call the mainframe. In essence, Adaptigent allowed them to create a united front end for all users to access.

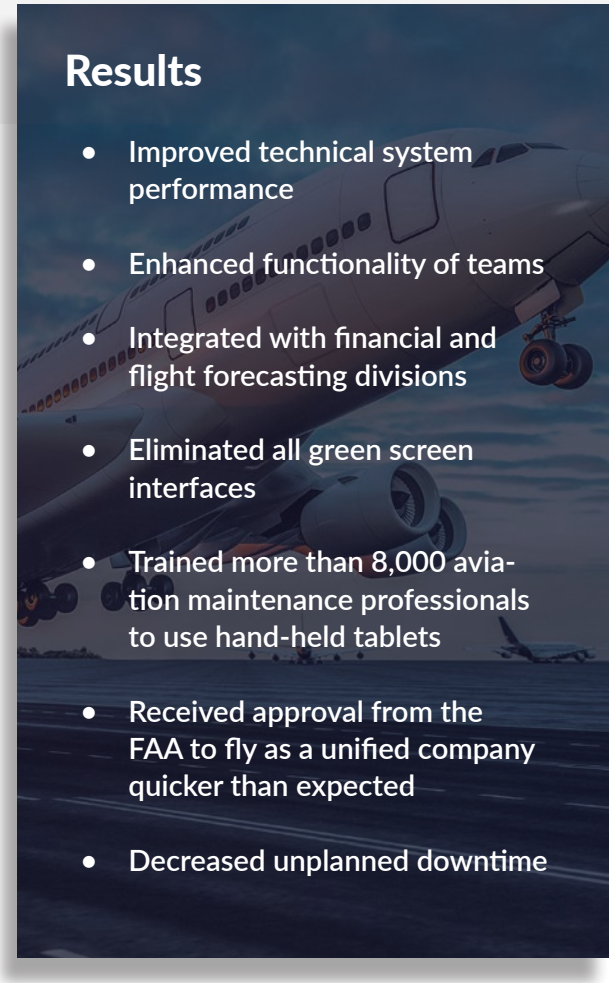
It was a complex architecture with APIs interfacing via orchestration. The front-end services tell which system a user is entering, and then searches data for the desired part or information. No one wants to log into two separate systems to locate one screw. This way, the front end decides which 'service' to call. Then, orchestration unifies APIs into a single set that decides and pulls information together.

Airline M&A Results

Modernizing the environment with the Adaptive Integration Fabric not only improved the technical performance of the systems, but also the functional performance of the teams. The integration created a user-centric process for maintenance and repair, and it allowed teams to integrate maintenance systems and functions with other airline operations, including finance and flight forecasting.

The result is a widespread, coordinated, and nimble system that saves time and increases efficiency. The airline received Federal Airline Administration (FAA) approval to fly as a unified company quicker than expected. The merged companies continue flying under one name.

The airline estimates about 300 APIs are in use across the organization, handling around one million mainframe transactions per day.



“All our teams now have access to the same datasets, giving us the ability to make quick decisions on the spot to drive operational improvements.”

- Airline Merger Operations Director

APIs for Smoother Mergers and Acquisitions

This white paper underscores the power of APIs in connecting systems and enabling successful technology integration. It emphasizes the need for collaboration between business strategy, IT, and external partners. We recommend businesses embrace APIs as a flexible, responsive, and user-centered approach to integration during and after M&A.

To learn how Adaptive Integration Fabric could support your business needs, visit www.adaptigent.com or email info@adaptigent.com.

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Adaptigent is a software technology company offering solutions to help businesses harness the power of APIs for innovation and growth. A global distributor of the Fujitsu NetCOBOL compiler, Adaptigent seamlessly integrates core systems. More than 2,500 organizations globally trust Adaptigent solutions. Visit www.adaptigent.com.

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