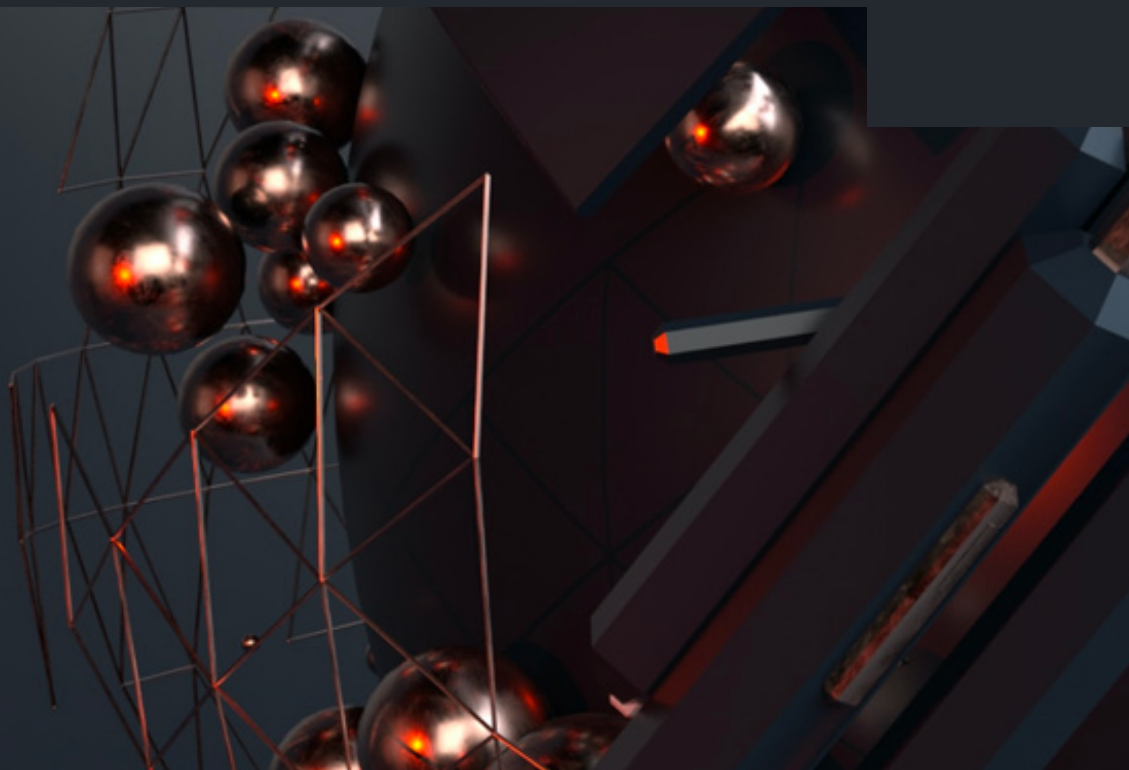


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Digital ecosystem integration
for mid-sized businesses



Startups

05 Data management and governance

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What is

digital ecosystem integration, and why is it important?

In 2023, digital ecosystem integration remains a critical and relevant issue for businesses of all sizes and industries.

As companies continue to digitize their operations, the number of disparate digital systems and applications they use also increases, leading to fragmentation and inefficiencies. Without proper integration, these systems cannot communicate and share data effectively, leading to data silos and a lack of visibility across the organization.

130 different SaaS applications are in use by an average mid-sized company in 2023



In its turn, customers expect a seamless experience across multiple channels, such as web, mobile, social media, and in-store. Companies that cannot provide this seamless experience risk losing customers to competitors who can.

70% of the business apps today are SaaS-based



According to our experience, inefficient processes can result in wasted time and resources, while inaccurate data can lead to poor decision-making. Security breaches can also result in reputational damage and legal liabilities.

Considering the complexity of the problem, we decided to describe it based on Aimprosoft's client business stories paired with a problem-solution approach according to our own experience.

▪ DATA MANAGEMENT AND GOVERNANCE

BUSINESS CASE 1

Integrating disparate data sources and maintaining data quality, consistency, and security can be complex.

Company A, a rapidly expanding mid-sized company, is finding it increasingly difficult to manage the vast amount of data produced by its daily operations. Because of using an outdated and inefficient data storage infrastructure, the company experiences lengthy delays in retrieving and analyzing critical business data. This issue hampers decision-making and negatively impacts their overall business performance and competitiveness.

How to navigate data management challenges

Centralized data storage

Agree on a designated location for storing data to prevent duplication and ensure a single source of truth. A unified storage space such as Alfresco Digital Workspace can facilitate consistent data access and management

Master version control

Maintain a master version of each document to avoid discrepancies and confusion among employees. This ensures that everyone refers to the same, up-to-date information

Unified identification and access management

Implement a system like Microsoft Office 365 with the Alfresco Digital Workspace or Liferay DXP to enable flexible user management and easy access control

Segregated data access

Ensure that different departments, such as finance and legal, do not have access to the same information to prevent overlapping data and maintain privacy

Streamlined onboarding/offboarding

Develop efficient processes for granting and revoking access to data during employee onboarding and offboarding, ensuring a smooth transition and maintaining data security

GDPR-compliant tools

Use programming packages that comply with data protection regulations like the General Data Protection Regulation (GDPR) to minimize the risk of non-compliance and safeguard sensitive information

Use case from Aimprosoft's practice: AI-based data management

according to The State of Digital Adoption report by WalkMe

35%

investment in projects that
failed to meet their goals



60%

of decision-makers are concerned
that digital projects won't deliver
the expected ROI because of slow
adoption by end users



A UK-based startup in the field of data analytics approached Aimprosoft to help cope with manual data processing and raw data transformation to automate data management. Our team has successfully achieved a **5x performance boost** in system efficiency, leveraged Big Data to uncover powerful insights, automated inefficient data management and analytical workflows, and **reduced data preparation and discovery time by 80%**.

Struggling to manage the vast amount of data generated, significant delays in retrieving and analyzing critical business data, and hampered decision-making leading to decreased performance and competitiveness were dealt with **a solution for in-depth AI-based data management**.

Results:



Now tiresome manual data management has passed away, making way for structured data flows from different external data sources, continuous data refresh, and valuable metrics revealed. As a result, we rolled out an effective data management solution to help a business efficiently manage critical business data to make informed decisions faster.

▪ SECURITY AND PRIVACY CONCERNS

Integrating multiple digital systems can increase potential vulnerabilities and risks to sensitive data.


Company B decided to integrate multiple digital systems, including inventory management, customer support, and payment processing. In doing so, they inadvertently allowed employees access to sensitive customer data beyond their job requirements. This lack of access control led to an internal data leak, affecting customer trust and the company's overall reputation.

How to cope with an unauthorized data access

With the rapid growth of technology and the increasing reliance on digital systems, the threat of cybercrime and unauthorized data access has become a major concern for companies worldwide. As the threat of cybercrime continues to evolve and expand, the costs associated with it are expected to rise.

15% growth in spending on cybercrime is expected over the next five years.
Cybersecurity Ventures





It is clear that the need for effective cybersecurity measures has never been more pressing, and companies must take proactive steps to protect themselves from the potentially devastating consequences of a cyber attack.

Based on our 18 years of market experience, we prepared a cybersecurity guide to explore the technical nodes that can pose a risk to your organization's security, and provide actionable steps that you can take to improve your cybersecurity posture.

[I WANT TO KNOW HOW TO KEEP ACCESS TO MY DATA UNDER CONTROL](#)

Results:



These practices have been tested and implemented by us, and we recommend them as simple yet effective solutions that any organization can easily implement. By following the recommendations in this guide, you can enhance your organization's security and protect your valuable assets from cyber threats.

- **LIMITED RESOURCES AND EXPERTISE**

Mid-sized businesses may face resource constraints and lack the necessary in-house expertise to manage complex integration projects.

B2B Agency A developed an app for managing databases to efficiently and securely serve its recruiting agency clients. However, as the client base expanded and data demands grew, the application, maintained by a small IT team, faced performance issues and limitations. Integrating the application with third-party systems proved challenging, affecting client satisfaction and the agency's reputation. To address these issues, Agency Alpha explored partnering with IT outsourcing companies to develop a more scalable and flexible data management solution to meet their clients' needs and support future growth.

How to cope with the company's outgrowth of its IT infrastructure

1

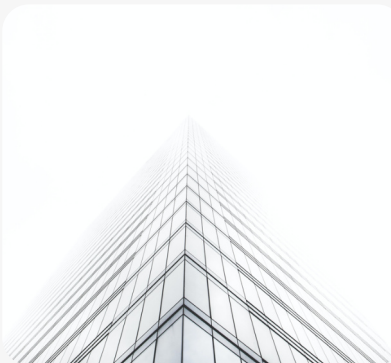
Evaluate and prioritize application functionality

Identify the most critical functions and features of the application to focus their efforts and resources on improving these areas first

2

Collaborate with a specialized IT outsourcing company

Partner with an IT outsourcing company experienced in data management and application development to augment the in-house IT team and address resource limitations



3

Make supportive collaboration

Ensure that the joint efforts between you and the potential vendor move in the way so that you can secure each other in case of changes of staff in your company

4

Implement a modular architecture

Redesign the app using a modular architecture, which allows for easy scalability and flexibility as the business grows and client requirements evolve

5

Invest in training and upskilling

Provide training and skill development opportunities for the in-house IT team to improve their technical expertise in data management, app development, and integration with third-party systems

Use case from Aimprosoft's practice: Corporate collaboration platform



As our client from the automotive industry approached a critical juncture, it became apparent that there was a dearth of technological innovation in the company's back office. Manual processing of documents stumbled the verification process in a fast-growing network, impeding Motive Retail from providing excellent customer service.

Our client was required to consolidate global content flows into a single platform that could store content and manage processes. Liferay DXP matched perfectly to function on a global scale and adhere to strict hierarchy rules.

Results:



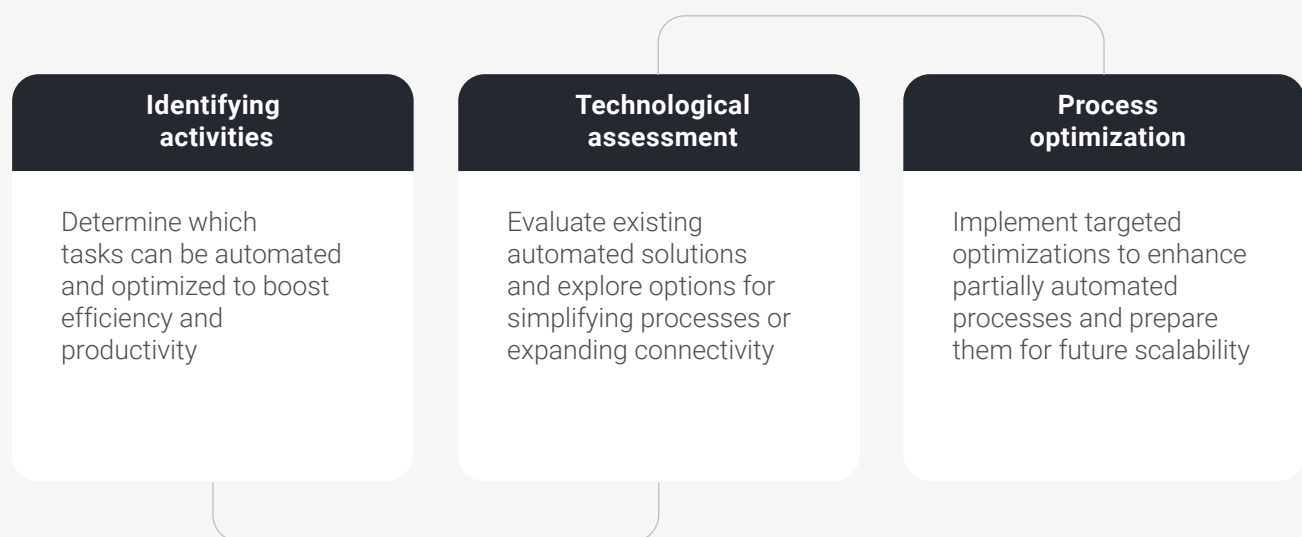
We resulted in a Liferay-based web portal, a centralized hub that enabled Motive Retail to carry out its daily operations, including managing local news portals, wiki pages, document libraries, media galleries, and more. Over 200 websites were created and independently managed on the portal, with user access differentiated based on their roles and permissions to ensure appropriate information access.

- **SCALABILITY AND FLEXIBILITY**

The inflexibility of the current integration solution to adapt to changes can result in operational bottlenecks and lost business opportunities.

Company D, a mid-sized logistics company, integrated its transportation management system with its warehouse management system. Over time, the company diversified its services and entered new markets, requiring additional functionalities and modifications to its digital ecosystem. However, their current integration solution lacked the flexibility to accommodate these changes, resulting in operational bottlenecks and lost business opportunities.

How to adapt digital ecosystems to accommodate changing needs



Use case from Aimprosoft's practice: Centralized information managements system for postal hubs

The US logistics provider was facing the need to automatically sort packages based on the destination, which required a centralized information management system. The solution developed by the team involved creating an information gathering system (conveyor facilities) that recorded metadata, classified it according to facility and system, and divided the backend component into three modules.

The team migrated from Cassandra 3.0 to MySQL during the second stage to save data integrity. In the third phase, the team implemented a solution that could deliver search results while processing millions of records in a matter of seconds. The developed centralized information management solution ensures that all data is filtered based on time, location, package size, damages to barcodes and packages, etc.

We resulted in

50,000+

**sorted packages
per day**



55%

**improved accuracy
of package sorting**



100

**records processed
in 1 second**



Results:



The centralized information management solution helped the provider efficiently manage critical package data to make informed decisions faster, likely resulting in increased performance and competitiveness.

▪ LEGACY SYSTEMS

BUSINESS
CASE 5

The challenge for mid-sized businesses is to upgrade their outdated IT infrastructure to integrate with modern digital tools while avoiding disruption to existing operations.

A mid-sized medical company E that offers specialized medical treatment services, such as cancer treatment and surgery, is struggling with managing patient information, scheduling appointments, and providing timely updates to patients and their families. The company's management realizes that a more efficient and organized system is required to enhance patient experience and streamline internal processes.

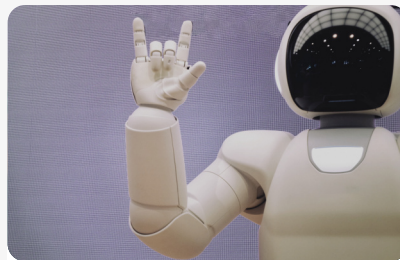
How to manage data flows from different sources

- **IMPLEMENT A CLIENT SELF-CARE PORTAL**



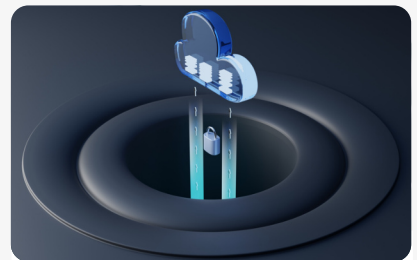
Develop a user-friendly, web-based portal where clients can log in to view project progress, submit requests, and access resources. This portal can also facilitate communication between the company and clients, reducing response times and keeping all client interactions organized

- **AUTOMATE REPETITIVE TASKS**



Identify repetitive tasks that can be automated, such as sending out progress reports or follow-up emails. Automation tools like Zapier or Integromat can help save time and improve efficiency

- **CENTRALIZE CLIENT AND PROJECT INFORMATION**



Create a centralized database or CRM system to store and manage all client information, project details, and communication history. This will make it easier for team members to access relevant information, leading to more efficient client support and faster response times

Use case from Aimprosoft's practice: Liferay-based data management



Aimprosoft was approached with helping a medical center struggling with managing its extensive database of contractors. The storage, search, and editing of the information with contractors were causing inconvenience and frustration for the center. After careful consideration, they decided to move their data management processes to a web portal.

We began the process by transferring all the content to the portal with hierarchical access. We collaborated with business analysts and medical managing staff to ensure the portal was tailored to the medical center's specific needs.

Results:

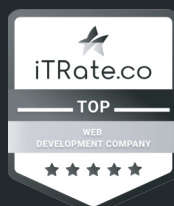
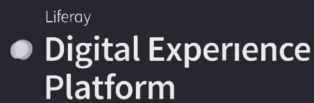
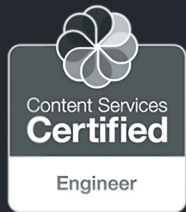


As a result, the client moved from storing information in disparate data sources and formats to a centralized information center where employees can access materials in different formats (pdf, images, videos). We streamlined the collaboration between the medical centers and contractors, data storage, search, and editing processes to make communication easier.

It is better

to work with *a trusted partner*
than to seek new paths alone.

John D. Rockefeller



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Aimprosoft is a software development company that offers a wide range of services for a successful digital transformation.

More than 18 years of market presence helped us obtain profound knowledge of product creation and become strong advocates of a customer-centric approach with a deep understanding of our clients' needs.

50+
technologies

in the arsenal of our experts help enhance the capabilities of our customers' businesses, increase their revenue, and modernize outdated processes.

Apart from a diverse stack of technologies, we also use the capabilities of Liferay, Alfresco, and Hybris platforms that have become our key tools for building enterprise-grade software solutions.

Over time,

we gained considerable expertise in application development for a wide range of industries, such as

**E-Commerce,
Healthcare, IoT, Real Estate,
Retail, Telecom, Education**
and many others

We develop software with care.

Contact us
to solve your digital integration challenges.

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