Integrating Data Sources is an Expensive Challenge for the Financial Services Sector
Executive summary

To better understand the impact of acquiring and integrating information from multiple external data sources, Kofax sponsored a survey through Computerworld Custom Publishing. The survey contained 10 questions, including:

- How many different external data sources are used regularly to support the organization’s business processes?
- What are the biggest challenges to the use of external data sources?
- How does your organization currently integrate external data sources?
- How long does it take, on average, to integrate an external source?

Over 400 executives responded to the survey, and the following results focus on the 100 responders representing the financial services industry.

Highlights of the financial services findings:

- 49% of all financial services responders claim to have more than 10 internal and external data sources that are relevant for their business processes...
- 48% of these responders claim to have more than 10 external data sources that are relevant for their business processes...
- 43% of the lack of integration of these data sources is mentioned to be a challenge for 43% of the responders...
- 34% of responders stated that manual processing of data is currently required...
- 84% WEB PORTALS
- 42% SaaS / CLOUD OFFERINGS
- 32% SOCIAL MEDIA
- 19% In general, information integration challenges appear to be relevant for 81% of the responders...
- 19% ... as only 19% of responders claim not to have integration challenges...
- 81% of external data sources do not provide an API...
- 20% of external data sources do not provide an API with full functionality...
- 34% of the responders estimate it to take more than 3 months...
- 20% of the responders estimate an integration project to be completed in less than a month...
- 55% USE A HARD CODING APPROACH
- 44% USE OPEN API
- 27% USE AN ENTERPRISE SERVICE BUS (ESB)
Implications of these findings

Financial services companies are found to be heavy users of public and private web portals, but these external data sources require a disproportionate amount of resources to integrate the information into the organization’s systems and processes. In many cases, in fact, integration efforts are abandoned altogether and the organization is forced to rely on manual integration, where there is a risk of error.

Financial services companies rely on information from a large number of sources. The banking and financial services sector is among the most IT-intensive industries, which is emphasized by the fact that almost half of the survey participants stated that their organizations use more than 10 external data sources to support their business processes. In a number of financial services companies this figure is likely to be much higher. Employees clearly need this information to achieve a complete view of their markets, customers, and business, however acquiring, enhancing, and delivering this information where it’s needed inside the organization is cumbersome and impacts employee and process efficiency.

“These findings reinforce that financial services companies spend a lot of time and resources working with external data sources. Some organizations choose not to automate the integration of this information because it is deemed not a high enough priority, yet instead apply time-consuming, repetitive, error-prone, manual labor. Others integrate this information by hard-coding, even though external data providers often make changes to formats and content, which then requires recoding of the interfaces.”

Russ Gould, Kofax

How many different external data sources do you estimate are used regularly throughout your organization to support your business processes?

Cloud-based solutions such as Salesforce.com and various other applications are used by two out of five responding companies, while almost twice as many companies report using web portals to acquire critical business information. For example, responders cited using public registers and databases as well as credit rating agencies to make customer acquisition and retention decisions. Responders also indicated using a variety of professional services, market and industry information, and news sources, such as Bloomberg and Reuters. In addition, social media sources, such as LinkedIn.
Integrating data sources is an expensive challenge for the financial services sector

Please specify the external data sources used frequently throughout the organization to support business processes.

- **42%** SaaS/Cloud solutions
- **84%** Web portals (e.g. business partner portals)
- **32%** Social media pages
- **27%** Other

**Difficult and time-consuming to integrate external information**

Forty-three percent of the participating financial institutions are struggling with a lack of integration between external data sources and internal systems. Manual workflows, time-consuming data import and mutually incompatible data formats challenge respondents, especially when dealing with large scale data. Only one in five respondents replied that they are not having problems integrating data. This suggests relatively low maturity in terms of integrating external data sources with internal systems and processes. It therefore remains a complicated and time-consuming task to maintain control and consistency, as employees are forced to manually switch between a large number of user interfaces and must do their best to ensure data integrity.

**What are the biggest organizational challenges to leveraging external data sources?**

- **43%** Lack of integration with existing systems
- **30%** Time-consuming to import and hard to ensure data compatibility
- **34%** Manual workflow/processing
- **28%** Validating data formats
- **19%** Don’t have significant problems with data integration
- **22%** Not applicable
- **5%** Other

Although the responding financial services companies stated the use of a large number of external information sources, many of those sources do not offer an API or fully-functioning interface that provides for easy integration. This corresponds to the majority of responders stating that they typically rely on hard coding for external information integration. Perhaps even more surprising is that more than half of the responders stated that they are not aware of how many of the external sources have a fully functional integration interface.
Integrating data sources is an expensive challenge for the financial services sector. Two in five of the responding financial services companies use APIs to integrate external data with the organization’s other systems. But well over half integrate this data primarily using manual hard coding. This is a very expensive, time consuming, and inflexible method to enable the acquisition of and interaction with external information sources.

**How many different external data sources do you estimate are used regularly throughout your organization to support your business processes?**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Range</th>
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<tbody>
<tr>
<td>18%</td>
<td>0% - 20%</td>
</tr>
<tr>
<td>15%</td>
<td>21% - 40%</td>
</tr>
<tr>
<td>10%</td>
<td>41% - 60%</td>
</tr>
<tr>
<td>4%</td>
<td>61% - 80%</td>
</tr>
<tr>
<td>2%</td>
<td>81% or more</td>
</tr>
<tr>
<td>51%</td>
<td>Don’t know</td>
</tr>
</tbody>
</table>

**High cost, inflexible, manual coding**

Furthermore, this method of hard coding information interfaces comes along with a number of challenges in the form of complicated maintenance and dependence on certain resources. For example, if the external data provider changes its interface or its data structure or format, the hard-coding must be modified. One respondent elaborates on the challenge by stating that when the external data vendors change the setup or the format of the data files, the organization is forced to adapt and adjust quickly. Unfortunately, the responder stated that they seldom get sufficient prior notification of these changes.

Responses also indicate, perhaps not surprisingly, an increase in the use of relatively expensive Enterprise Service Bus (ESB) integration solutions to deal with these challenges. With a penetration rate of almost 30%, this study found ESBs to be far more prevalent in the financial services sector than in other industries.
Lack of integration takes time and trust

While this study demonstrates that it is costly and time consuming to integrate external data sources using the traditional data integration tools and hard coding method, it is even worse not to do it. Respondents stated that working with external data without integrating it into the organizations systems and processes takes even more time and leaving the organization vulnerable to the challenges of validating data and ensuring data integrity. It is very time-consuming, and thus expensive, having employees manually accessing and gathering information from sources and it can be difficult to rely on the information due to incompatible formats and the risk of manual error.

Several respondents stated that not integrating data into their systems effectively results in “increased risk of error,” “need for costly external consultants,” “dependence on key personnel” and “poor data quality.”

Need for faster integration of data sources

It is clearly a comprehensive and time-consuming task to integrate external data sources into an enterprise infrastructure. Less than one in ten of the financial services responding companies indicated that an external information integration project can be completed in less than a month. In fact, 41% indicated that it typically takes up to six months and 14% indicated that it can take six months to a year to complete. This illustrates the need to find a faster and more efficient way to perform external data integration.

How long does it take on average to integrate an external source (from project start to finish: requirements specification, testing and actual integration)?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Time Frame</th>
</tr>
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<tbody>
<tr>
<td>8%</td>
<td>Under a month</td>
</tr>
<tr>
<td>24%</td>
<td>1 – 3 months</td>
</tr>
<tr>
<td>17%</td>
<td>3 – 6 months</td>
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<tr>
<td>9%</td>
<td>6 – 12 months</td>
</tr>
<tr>
<td>5%</td>
<td>12 months or more</td>
</tr>
<tr>
<td>37%</td>
<td>Don’t know</td>
</tr>
</tbody>
</table>
Information integration challenges unduly burden enterprises

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>64%</td>
<td>Time required to manually import data</td>
</tr>
<tr>
<td>60%</td>
<td>Data validation</td>
</tr>
<tr>
<td>15%</td>
<td>Other</td>
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“Being unable to easily integrate external information sources seamlessly into the operation, companies are forced to rely on employees manually switching between numerous interfaces to get at the information they need. This is expensive and adds a level of risk into the operation, which works against the process efficiency, compliance and risk management strategies imperative to successful financial services institutions. This emphasizes the need for more flexible integration solutions.”

Russ Gould, Kofax

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