

Interfacing Kanbanize

Table of Contents

| | | |
|-------|---|----|
| 1 | Introduction..... | 1 |
| 2 | Typical use cases for interfacing with Kanbanize..... | 2 |
| 2.1 | Batch updates to Kanbanize of data transferred from another tool..... | 2 |
| 2.2 | Handling of entities captured in third party tools..... | 2 |
| 2.3 | Cases where existing interfaces cannot be easily changed..... | 2 |
| 2.4 | Other examples..... | 2 |
| 3 | Overview of interfacing methods..... | 2 |
| 3.1 | Spreadsheet interfacing..... | 3 |
| 3.2 | Business Rules..... | 3 |
| 3.3 | Zapier..... | 4 |
| 3.4 | Microsoft Power Automate..... | 5 |
| 3.5 | Make (formerly Integromat)..... | 6 |
| 3.6 | Kanbanize API..... | 7 |
| 4 | Security Issues..... | 7 |
| 4.1 | Spreadsheets..... | 8 |
| 4.2 | Third-party Middleware..... | 8 |
| 4.3 | Kanbanize API and Business Rules..... | 8 |
| 5 | Synthesis..... | 9 |
| 5.1 | Scope..... | 9 |
| 5.2 | Cost..... | 9 |
| 5.2.1 | Operational cost..... | 9 |
| 5.2.2 | Implementation and maintenance cost..... | 9 |
| 5.3 | Technical Knowledge Requirement..... | 10 |
| 5.4 | Reactivity..... | 10 |

1 Introduction

Kanbanize may be interfaced with many different applications. Data may be sent both *to* and *from* Kanbanize. This document provides an overview of the possible methods to interface Kanbanize, describing the advantages and disadvantages of each method.

The interface methods range from highly automated, high performance methods to largely manual and relatively slow methods. The methods chosen may have an impact on the security of the information transmitted. The methods might also impact the end-to-end availability of information. The methods will vary in terms of the degree of technical knowledge required to implement, maintain and operate the interfaces. Furthermore, while all methods involve the costs of labor to implement them, some methods have additional operational costs, either due to the labor involved or the costs of the services used. All these issues will be addressed here.

This document is based on Kabanize ver. 8.11. Future versions may add to, change or deprecate any of the information provided here.

2 Typical use cases for interfacing with Kanbanize

2.1 Batch updates to Kanbanize of data transferred from another tool

Suppose an organization wishes to replace an existing kanban management tool by Kanbanize. It may wish to make much of the data in the existing tool available in Kanbanize. Depending on the complexity of the transfer process and the volume of the data, the transfer might be performed in batches and/or in a transactional manner.

2.2 Handling of entities captured in third party tools

An organization might regularly receive information, often coming from third parties, that is captured in specialized tools. Examples might be electronic purchase orders, requests for proposals, applications for employment, and so forth. The workflow to handle such information would be managed in Kanbanize. Therefore, when the specialized tool registers a new object, an interface could create a corresponding card in Kanbanize for handling its workflow. When that workflow is completed, an the interface would return to the specialized tool the final status of the item.

2.3 Cases where existing interfaces cannot be easily changed

Organizations frequently have in place data processing tools to manage their interactions with third parties, especially their customers and suppliers. Sometimes, these tools are widely used or standard industry platforms that cannot be easily changed. In such cases, it might make little sense to manual create or update cards in Kanbanize when that data already exists in digital format.

2.4 Other examples

There is no limit to the possibilities of interfacing third party tools with Kanbanize. Note, though, that an alternative to creating and maintaining an interface would be to do all the handling of the work item within Kanbanize itself. Many of the tools already in place in an organization are fundamentally communication and workflow tools, which is precisely the purpose of Kanbanize. It might make more sense to transfer all work item handling form such tools directly to Kanbanize, rather than interfacing the tools.

Note, too, that Kanbanize can readily captured structured data via custom fields. It might make more sense to create custom fields rather than to first capture that data elsewhere, only to transfer it Kanbanize via an interface.

3 Overview of interfacing methods

This section lists the various methods available to interface Kanbanize. In general, they are listed starting with the slowest methods requiring the least technical knowledge and going to the fastest methods requiring the most technical knowledge.

3.1 Spreadsheet interfacing

Kanbanize can export data to spreadsheets and import data from spreadsheets. When importing data, it knows how to create new records as well as update existing records. Insofar as the source or target application can do likewise, a spreadsheet is a low technology means of getting data into and out of Kanbanize.

Note that Kanbanize refers to “Excel” in its documentation and on screen messages. You do *not* need Excel to use this function. However, you do need software that can read and write to files in .xlsx format.

Furthermore, Kanbanize offers a free add-on to Google Sheets that facilitates extracting card data from a board.

Most users are familiar with spreadsheets so little technical knowledge or training is required to implement an interface with spreadsheet middleware. Care is required especially in the formatting of data, especially where dates and times are used.

A spreadsheet interface is particularly interesting for the case of a one-off interface, where data is extracted from Kanbanize for analysis in a different tool, but it is not expected to repeat that extraction or analysis on a regular basis. In such cases, the task can be accomplished rapidly.

For more information:

<https://knowledgebase.kanbanize.com/hc/en-us/articles/115003163029-How-to-export-data-from-Kanbanize->

<https://knowledgebase.kanbanize.com/hc/en-us/articles/360018568592-How-to-Export-and-Import-Data-using-the-Kanbanize-for-Sheets-Add-On->

To try:

Open any board in Kanbanize and click on the Import / Export icon in the right panel.

3.2 Business Rules

Kanbanize can transmit data via business rules. Every rule, no matter what the trigger, can send data via two channels: email and webhooks. Email might be a suitable channel if the message requires human interpretation before acting on it. However, it is subject to all the issues of the email channel: there is no guaranteed delivery time; messages may be subject to unexpected filtering; and people are not always good at processing received email.

Sending a payload of data via a webhook basically uses http(s) to transmit to any URL designed to receive and handle such payloads. The method is very flexible, allowing various authentications, complementary headers and structured payloads. This implies, though, that a good amount of technical knowledge is required to create a well-formed message that the receiving application will accept.

Note that business rules cannot be used to directly handle incoming data from other applications. However, they may be used together with the API (see below) to create two-way communication between Kanbanize and another web service.

For more information:

<https://knowledgebase.kanbanize.com/hc/en-us/articles/115003766429-What-is-a-Business-Rule->

To try:

Click on the Account Administration icon in the upper right corner, then select “Business Rules”.

3.3 Zapier

Zapier is an online middleware service. It emphasizes ease of interface setup and use. Every case requires a separate interface, or “zap” in the Zapier parlance. Thus, if a single triggering event can have multiple triggered actions *depending on the triggering data*, a separate zap must be defined from each case. While cognitively simpler, in complex situations a multitude of zaps might be difficult to maintain. Compared to other products, Zapier has very few features for the automation scheduling.

A connector exists for Kanbanize, recognizing the following Kanbanize events:

- New board
- New card
- Card moved
- Card updated
- Add comment
- Add subtask
- Create card
- Delete card
- Update card
- Update link
- Log time
- Move card
- Find card
- Find or create card

The connector can execute the following actions in Kanbanize, depending on the interfacing application and the triggering event:

- Create card
- Delete card
- Add comment
- Move card
- Update card
- Update link
- Log time
- Add subtask
- Find card
- Find or Create Card

Zapier has various pricing plans, depending on the volume of interactions required and the performance. For example, Zapier provide a free plan, but it handles triggers every 15 minutes, rather than immediately.

For more information:

<https://knowledgebase.kanbanize.com/hc/en-us/articles/115004177805-Connect-Kanbanize-to-other-apps-using-Zapier>

To try:

Requires an account in Zapier (may be a free account). Follow the instructions in the knowledgebase article cited above. Zapier provides a testing feature before the interface goes live.

3.4 Microsoft Power Automate

Power Automate is similar to Zapier in that it is a middleware solution. Microsoft positions it as a robotic process automation service. It might be a good choice when an interface between Kanbanize and a Microsoft product, such as Teams or Outlook, is required, insofar as it provides extensive support for the triggering events specific to these products.

Currently, Power Automate operates only from a third party application to Kanbanize. That is to say, the Kanbanize connector defines only actions in Kanbanize, but no triggers. The triggers must be defined in the connectors to the interfacing applications.

Power Automate also provides a features not often found in competing middleware services. These include the possibility to record desktop actions as a means define a flow; and what Microsoft calls artificial intelligence to help process the data in triggers and define the course of a flow.

The following actions in Kanbanize are available:

- Add Comment
- Create Card
- Create Subtask
- Get Board Columns
- Get Boards
- Get Lanes
- Get Types
- Log Time
- Move Card
- Update Card

A typical use case would be the capture of data in a form created in a Microsoft product, whose data is used to create or update a card in Kanbanize.

Power Automate is licensed either by the number of users or by the number of defined flows. The Kanbanize connector for Power Automate is a “premium” connector, meaning that its use requires regular payments to Microsoft.

For more information:

<https://docs.microsoft.com/en-us/connectors/kanbanize/>

<https://powerautomate.microsoft.com/>

To try:

Microsoft offers a free trial license.

3.5 Make (formerly Integromat)

Make is yet another middleware product, similar to Zapier and Power Automate. There are over 1'000 applications with connectors, including Kanbanize.

Like Zapier, the service has a variety of price plans, ranging from a free plan to high volume custom plans. The plans vary according to the number of monthly operations, the volume of data transmitted and the delay from the trigger until the execution of the operation.

The following triggers or actions are available for Kanbanize:

- Watch new task
- Watch task updated
- Watch task moved
- List tasks
- Get a task
- Create a task
- Move a task
- Update a task
- Delete a task
- Create a subtask
- Update a subtask
- Create a comment
- List links
- Update a link
- List Projects and Boards
- Log Time
- Synchronize cards with external entities
- Make an API call

Make includes algorithmic handling of the data it receives, allowing the creation of complex , processing and handling before the actions are finally performed by the target application. Suppose, for example, that an operation is triggered by the creation of a new card in Kanbanize. That operation can inspect the contents of the payload, transform them via various functions, make decisions on what workflow to follow based on the values of the various transmitted fields. One might imagine that each card type might have a different workflow to process it, ultimately leading to different actions. Benefiting from this level of sophistication is likely to require training and experience, unlike simpler middleware solutions.

For more information:

<https://www.make.com>

<https://knowledgebase.kanbanize.com/hc/en-us/articles/360020527020-Azure-DevOps-Integration-Scenarios-with-Kanbanize-via-Integromat>

To try:

Requires a Make account, including a free plan. Make provides a testing feature before the interface goes live.

3.6 Kanbanize API

The Kanbanize REST API provides a standard way for third party applications to read and update Kanbanize data. Indeed, the Kanbanize connectors used with the various middleware solutions described above use the API on the Kanbanize side of the operations they permit. Unless a very specialized interface is required—either with a product that has no existing connector or one requiring triggers and/or actions that are not otherwise handled by the existing connectors—it may be preferable to use an existing middleware product rather than creating an interface from scratch using the API.

Virtually all the functionality available to users via the Kanbanize web interface is also available via the API. That being

A second generation API for Kanbanize has been announced. Users are welcome to test the current beta version. The implication is that the API ver. 1 is liable to be deprecated at some, currently undetermined, time in the future.

For more information:

<https://kanbanize.com/api>

To try:

Various browser extensions are designed to test REST APIs. They provide a lightweight means for developing and testing the interface.

4 Security Issues

As information security is a vast topic, it will not be discussed systematically here. However, a few issues will be mentioned, issues that might influence the choice of interface method. The issues may be grouped according to whether the method is:

- using spreadsheets
- using a third party middleware service
- using the Kanbanize API and/or business rules

Several account permissions are related to interfacing:

- Admin Privilege | Manage Business Rules: permission to create, modify and delete business rules

- Admin Privilege | Manage Integrations: permission to manage email integrations and board webhooks
- Role Privilege | Board Permissions | Export: permission to export data to spreadsheets
- Role Privilege | Board Permissions | Access API: permission to access a board via the API

4.1 Spreadsheets

Exporting to and importing from spreadsheets will probably be available to most users, unless the export permission is not granted. Note that there is no explicit import permission.

A spreadsheet is an intermediate data store that is rarely provided with greater confidentiality than that provided by the file system in which it is located. Furthermore, only the exporting user controls where the spreadsheet is created or moved. Similarly, protecting access to the spreadsheet via a password and deleting spreadsheets once used are also under user control. In addition, backups and archives of the such spreadsheets are subject to the general policies of protecting such information.

4.2 Third-party Middleware

In principle, the payloads of interfaced data pass via the systems of the third party providers but are not stored by those providers. On the other hand, metadata about interface operations is generally logged, typically for debugging purposes, unless the interface administrator disables such logging.

Although the data in transit is normally encrypted end to end, the use of a third party adds a potential attack vector for any party attempting to divulge the data in the interface payloads or disrupt the functioning of the interface.

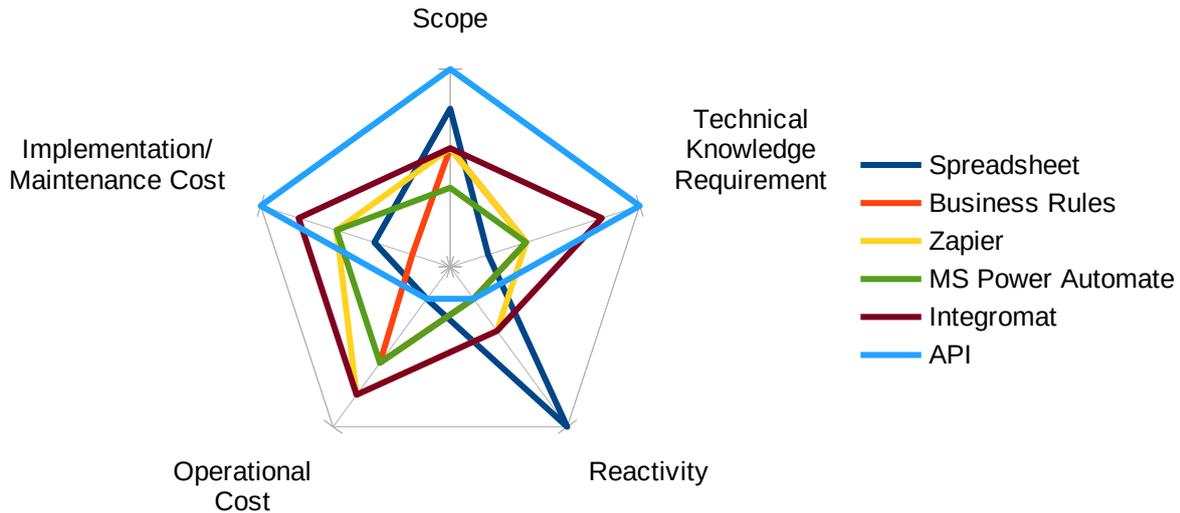
Furthermore, adding another entity to the interface inevitably lowers the end to end availability of the data. Although these levels of availability tend to be very high, the data owner should consider what service continuity options are available should a middleware provider fail temporarily.

4.3 Kanbanize API and Business Rules

The Kanbanize API and use of webhooks via business rules is the simplest interface (from a systems perspective), meaning the method has the fewest potential attack vectors. They are not free from risk, however, as they depend on the confidentiality of API keys (as does third party middleware).

5 Synthesis

The following diagram positions the various interfacing solutions. The axes are described below.



Security is not included in the chart, as the risks would vary enormously from organization to organization. Each of the axes in the chart are described in the following sections.

5.1 Scope

The scope of the interface refers to the breadth of the triggers and actions of the interface. The widest scopes are found for the spreadsheet and the API interfaces. The business rule interface is somewhat more restricted. The middleware services tend to have the smallest scopes, with the MS Power Automate interface being restricted to Microsoft products (albeit it offers the largest scope for those products among the various middleware services).

In the end, scope is more of a strategic factor in choosing an interface, once the immediate requirements have been satisfied. For example, if the immediate interface requirements concern only Microsoft products, the Power Automate interface is likely to be satisfactory. However, if there is t

he possibility of future interfaces to non-Microsoft products, then Power Automate will not be able to fulfill those needs.

5.2 Cost

5.2.1 Operational cost

How much does it cost to run the interface? These costs include the cost of labor (especially for the spreadsheet interface); service fees (especially for middleware services); and platform costs.

5.2.2 Implementation and maintenance cost

This is an estimation, closely related to the degree to which technical knowledge is required set up or change the interface.

5.3 Technical Knowledge Requirement

Some technical knowledge is required for all interfaces. However, the knowledge required for the spreadsheet interface is likely to be had by most users. At the other extreme is the use of the REST API, which requires technical knowledge of http protocols, software development as well as an understanding of the data models in the interfaced systems.

5.4 Reactivity

The different interface solutions vary in terms of how quickly they can react to the interface triggers. At the low end is the spreadsheet interface, which is a batch interface highly dependent on the availability of people to operate the interface and their knowledge of importing and exporting data. In the middle range are the middleware services that typically take from 1 minute to 15 minutes to react to a trigger, depending on the plan purchased. At the high end are the use of the REST API and business rules. While these interfaces react immediately to triggers, the latency of the system (the server platforms and the network) will determine how quickly the interface is executed.