

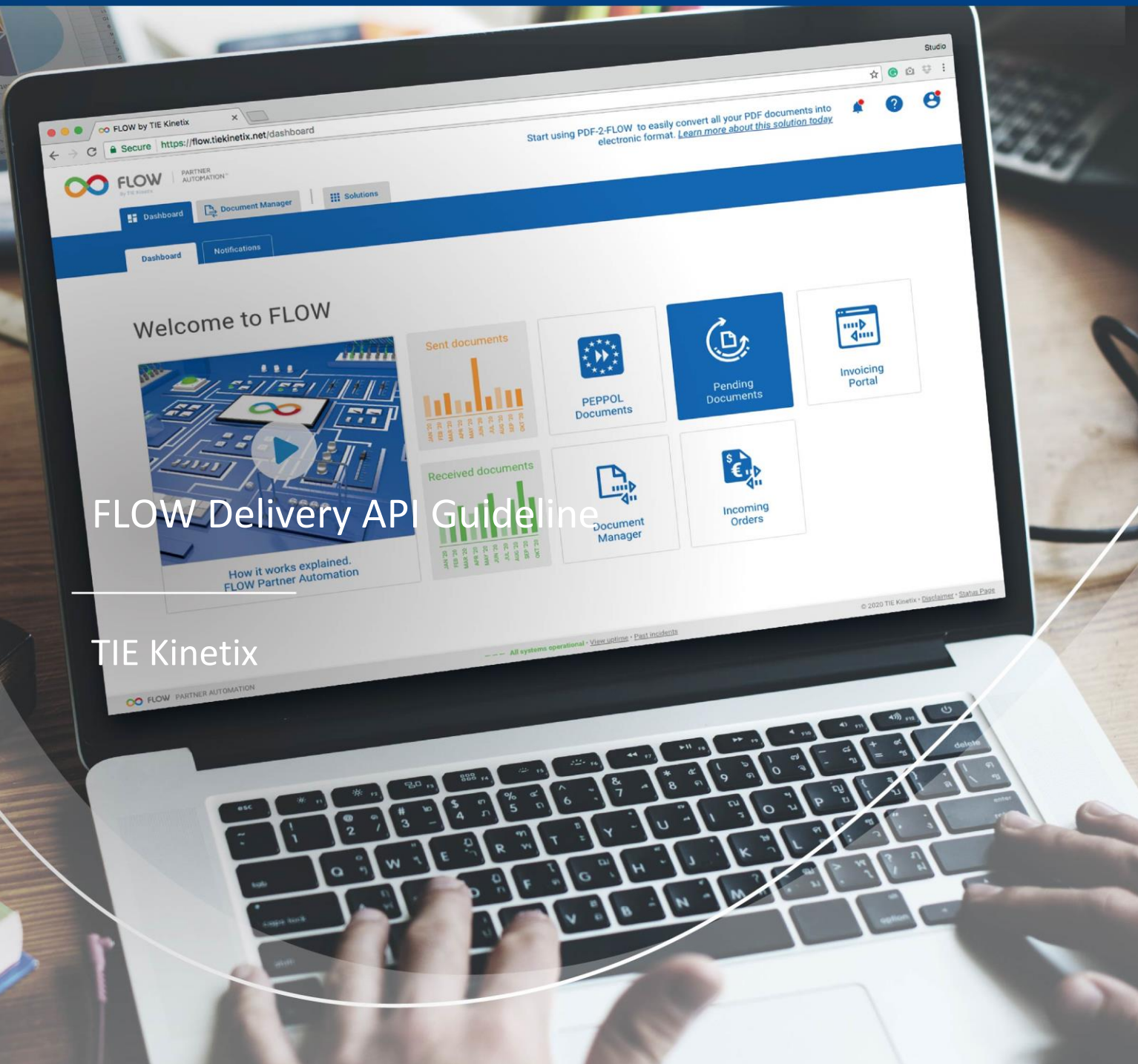


FLOW
by TIE Kinetix

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FLOW Partner Automation Platform





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FLOW Delivery API Guideline

Restricted

An NDA is needed in order to access the information of the current document.

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1. TIE KINETIX FLOW - END-TO-END PARTNER AUTOMATION SOLUTION

FLOW Partner Automation, our software platform, empowers its users to engage in smart business exchanges and streamline communication through seamless integration with any existing system. FLOW Partner Automation solutions are designed to optimize processes across the entire partner and customer journey. Our solutions are designed to give you and your partners less work (not more), and we are dedicated to your success: maximal efficiency and minimized costs throughout your entire supply chain.

Easily connect your business apps with FLOW and leverage a rich library of connectors to exchange sales, financial, and logistics data with your partner community. For over 33 years, we have supported local EDI and e-invoicing standards for all countries and industries globally. With seamless integration into any existing (ERP) system and a suitable pricing structure, it's easy to get started.



1.1. Delivering A 100% Digital Supply Chain

At TIE Kinetix, we deliver Software as a Service (SaaS) solutions to companies, governmental institutions, and their suppliers, to help them exchange all business documents electronically and simplify supply chain processes as a result. Working with trading partners means that you have a lot of important data flowing in and out of your organization each day. We know that document exchange capabilities vary, so we give you the tools and support you need to encourage all your partners to meet your requirements, or, alternatively, to meet your partners' requirements.

1.2. Our Document Exchange Solutions

TIE Kinetix offers electronic document exchange and data integration solutions that enable you to automate supply chain processes with all your trading partners and suppliers. Our solutions' capabilities include data mapping, validation, conversion, and monitoring and error handling to supply actionable insights.

Through data integration, PDF document conversion, and the ability to set up a portal where small partners can manually send invoices and other business documents, you can improve your document exchange processes. This leads to a reduced workload, giving your employees the time they need to focus on your organization's core business.

1.3. All Document Types & Standards Supported

TIE Kinetix supports an extensive list of electronic document types and international standard formats and has the utmost commitment to security. When a document passes through our network, all relevant data is automatically extracted, translated, and dispatched to its intended destination. For ease of access, all documents are stored in their original format, as well as in a human-readable version for convenience purposes. Quality data is always guaranteed.



2. FLOW DELIVERY API

The FLOW Delivery API can be used to deliver files to the FLOW platform. This type of connection can be used to send any type of electronic document, and is frequently used for sending electronic XML documents.

2.1. API Definition

TIE Kinetix can only be responsible for the correct delivery of the documents once they have been explicitly delivered on the FLOW platform. To provide a correct split of responsibilities about messaging, a PUSH mechanism is needed.

TIE Kinetix is not responsible for the data that is contained in the documents (as the data is managed/created by the end-users and/or the 3rd Party systems).

The FLOW Delivery API is described as:

- It accepts POST requests
- The body of the post request should be the file (XML payload).
- The filename will be extracted from the content disposition HTTP header if it is available.
- The test service is configured to have the authentication turned off (just for the test!), but the API supports the following authentication methods:
 - Client certificate
 - Basic authentication (user name + password)
 - OAuth (access token)
- It accepts an HTTP header "X-Correlation-ID". If provided, its value should be unique and will be used as transmission key (see the status updates example below).
- For each call it can be configured to send back status updates (see the structure below). To configure this functionality, we need to know the callback URL. The callback URL for each request can be defined in a specific HTTP header "StatusReportCallbackAddress"

3. DATA / XML PAYLOAD

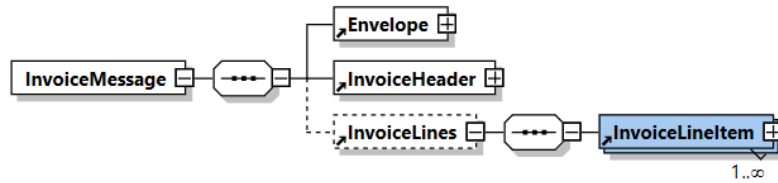
The preferred option as payload in the API calls is the use of TIE Global XML. TIE Global XML is an easy XML document format containing all the data needed to fulfill the core data of the different international standards and if needed, TIE Kinetix can transform it into the correct format for the receiver.

Please read the [LICENSE](#) file to know about TIE Global XML

There are definitions for more than 18 document types withing TIE Global XML. Global data types definition can be download at [TIE Global Commons](#)

The core document set is composed by

- [Order](#)
- [OrderResponse](#)
- [Despatch Advice](#)
- [Invoice](#)



Documentation on the semantics of the schema is embedded into the XML schemas.

3.1. Transfer status

The API returns a message with ID and a status: 200 OK.

The correlationID is the unique ID which the support department can use to find a document on the server.

You will also get a 200 OK back if the structure of the XML document is incorrect. The document structure is only checked after receipt. If your document structure is incorrect an ERROR will be displayed in your FLOW portal and the error status and reason can be obtained through the status messages (see next section).

3.2. Status of messages

If a Callback URL is provided as part of the call, a status report message will be pushed back by FLOW to your callback service. The response can contain status updates for multiple documents, that's why it is formatted as a JSON array like this:

```

[
  {
    "EnvelopeNumber": "envelopeNumber1",
    "DocumentNumber": "documentNumber1",
    "CorrelationId": "transmissionKey1",
    "TimeStamp": "2022-09-15T14:07:30.2552366",
    "ProcessingStatus": 4,
    "ProcessingStatusName": "Sent",
    "ErrorCode": 0,
    "ErrorDescription": "No error"
  },
  {
    "EnvelopeNumber": "envelopeNumber2",
    "DocumentNumber": "documentNumber2",
    "CorrelationId": "transmissionKey2",
    "TimeStamp": "2022-09-15T14:07:32.42552375",
    "ProcessingStatus": 4,
    "ProcessingStatusName": "Sent",
    "ErrorCode": 1,
    "ErrorDescription": "Document cannot be sent"
  }
]

```

Details:

- EnvelopeNumber is the equivalent of interchange number in EDI



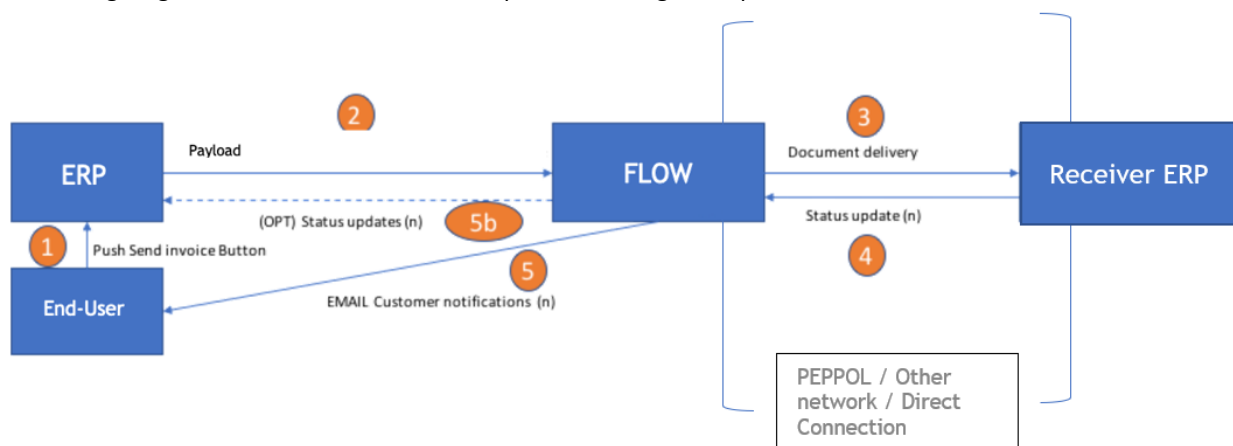
- DocumentNumber example: order number or invoice number as specified in the document body
- CorrelationId is the original transmission key used as value of the “X-Correlation-ID” HTTP header in the original POST request if it was provided, else it’s a GUID generated by FLOW
- ProcessingStatus specifies the current status of the document and can have the following values:
 - 0: InProcess,
 - 1: Translated,
 - 2: Grouped,
 - 3: WaitingForSend,
 - 4: Sent,
 - 5: SentAndAcknowledged,
 - 6: Purged,
 - 7: Undetermined (normally you shouldn’t receive this code)
- ErrorCode possible values:
 - 0 : no error
 - != 0 : document is in error
- ErrorDescription: provides details about the error, if the document is reported to be in error.

Note that it is possible to receive multiple status reports for the same document, depending on the states that documents go through in the FLOW system.

To activate client certificate-based authentication, we need a .CER file to be used for identifying your application. If you have such a file, please send it to us, else we can generate one, but it will be a self-signed certificate.

3.3. Delivery Process description

The following diagram describes the different steps for the integration process. It also includes notifications.





Additionally, if after step 2, a problem is discovered with

- Missing information
- Document does not correspond to registered users
- Format incorrect

A notification email can be sent to the end-user. The Address at the Customer / XXXXX Service will be needed at the setup time, so that the error notification can be correctly delivered.

3.4. (OPT) Keep together service

In some business scenarios, a document can be required to be sent together with a PDF or other attachment(s). The API automatically ensures that the attachment to the e-invoice is grouped and therefore delivered to the recipient as 1 document. This is essential if the attachment contains important information for processing at the recipient. Please note that the filename of the main document should be specified, so that it can be recognized as such.

This option has to be explicitly requested as it is not part of the standard setup. The standard option is about encrypting (BASE64) the attachment

3.5. Receiving documents

Industry standards commonly use a push/push approach for sending transaction documents. When an application system needs to receive a document like an e-order or an invoice-response FLOW can push the document equally as described above but in the opposite direction. You will need to provide your access details like URL and credentials to TIE Kinetix. The payload of the message in this case will also be a TIE GLOBAL XML document (order, invoice, etc..)

4. ENDPOINT URLS

The specific production endpoints will be provided by TIE Kinetix upon go to live project.

4.1. Test environment

<https://flow-saas-test-document-basicauth-service.tiekinetix.net/>

In case a port number is required:

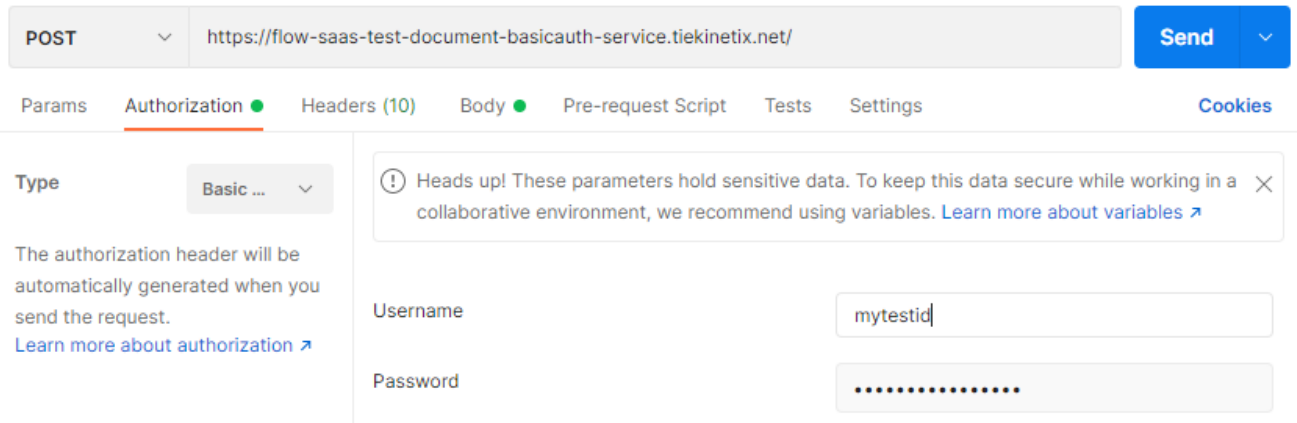
<https://flow-saas-test.tiekinetix.net:8092/>

5. HOW DO I USE THE ENDPOINTS?

Below 3 example methods are described of how a file can be sent to the FLOW platform. You can use this to test the connection. You can set up the link from your back-office system in the same way. The examples show how a pair of e-invoice and PDF file are presented. You can of course also send a document without an attachment.

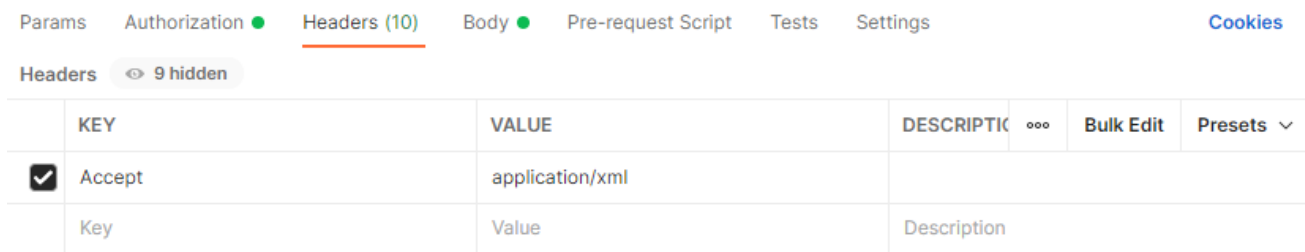
5.1. Sending documents via the Postman API tool

In the Authorization tab, set Username and Password.



The screenshot shows the Postman interface for a POST request to `https://flow-saas-test-document-basicauth-service.tieknetix.net/`. The **Authorization** tab is selected, showing a **Basic** authentication type. A warning message states: "Heads up! These parameters hold sensitive data. To keep this data secure while working in a collaborative environment, we recommend using variables. [Learn more about variables](#)". The **Username** field contains `mytestid` and the **Password** field is masked with dots.

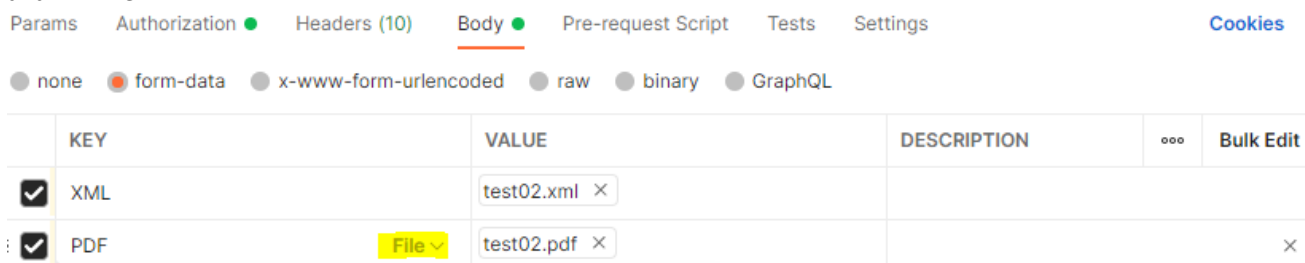
At Headers, the KEY field is set with Accept and the VALUE field with `application/xml`.



The screenshot shows the **Headers** tab in Postman. A table lists the headers:

KEY	VALUE	DESCRIPTION	Bulk Edit	Presets
<input checked="" type="checkbox"/> Accept	application/xml			
Key	Value	Description		

With Body, the option `form-data` is chosen. The KEY field indicates the file type. The VALUE field should refer to XML and PDF file.



The screenshot shows the **Body** tab in Postman. The **form-data** option is selected. A table lists the body items:

KEY	VALUE	DESCRIPTION	Bulk Edit
<input checked="" type="checkbox"/> XML	test02.xml		
<input checked="" type="checkbox"/> PDF	test02.pdf		

Note that the **KEY** field for the PDF item has a dropdown menu showing **File**.

Note that the option "File" or "Text" appears in the KEY field on the right-hand side when the mouse is moved over it. The option "File" must be set here.



Below is an example of a confirmation of a successful file transfer: Response: 200 OK.

```
Body Cookies Headers (8) Test Results 200 OK 173 ms 608 B Save Response
Pretty Raw Preview Visualize XML
1 <SmartBridgeHttpResponse>
2   <ErrorLevel>Success</ErrorLevel>
3   <Message>Your message has been received successfully by the messaging service, but it does not
4     mean it was successfully delivered to the intended recipient yet.</Message>
5   <CorrelationId>748924d975f8494ba73f352056fc6097</CorrelationId>
6 </SmartBridgeHttpResponse>
```

Notes: when the *Accept* header in the request is set to *application/json*, the response will be in JSON format

5.2. Sending documents via Curl

```
curl --location --request POST 'https://flow-saas-test-document-basicauth-
service.tiekinetix.net/' \
--header 'Accept: application/xml' \
--header 'Authorization: Basic c3ghfjhh424342NMDGDghfghfgGDFGDFGGDFGFGJ244555g==' \
--form 'XML=@"/C:/ Users/2021/600001.xml"' \
--form 'PDF=@"/C:/ Users/2021/600001.PDF"'
```

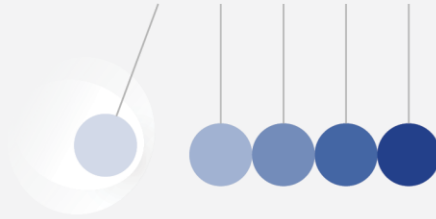
Replace the authorization string according to the provided credentials.



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About TIE Kinetix



At TIE Kinetix, we deliver Software as a Service (SaaS) solutions to companies, governmental institutions, and their suppliers, to help them exchange all business documents electronically and simplify supply chain processes as a result. FLOW Partner Automation, our software platform, empowers its users to engage in smart business exchanges and streamline communication through seamless integration with any existing system.

Since 1987, we have supported all EDI and e-invoicing standards and communication methods worldwide. Today, our global team of experts share their knowledge with our 2,500+ customers, facilitating the exchange of over 1 billion documents through FLOW each year.

TIE Kinetix is a public company (Euronext: TIE), and has offices in the Netherlands, France, Germany, Australia, and the United States.


TIE KINETIX

Visit www.TIEKinetix.com

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