

Pipe Invest

Import manual: Version 1.0.0



LOGSTOR Pipe Invest

Using the LOGSTOR Pipe Invest platform imported data is required.

The District Heating networks pipe data are imported into the software using GIS shapefiles complying with a predefined data model described in the following.

The shapefile is uploaded to the LOGSTOR Pipe Invest platform where the data are automatically screened and verified. The uploaded data forms the foundation for the analysis of pipe condition and provides you with a view of the general condition of your pipes.

Based on this, an economic view is generated, enabling you to experiment with predictive maintenance and investment planning of sustainable refurbishment with a budget.

Import of new pipe dataset

The import is conducted in six easy steps:

1. Create a shapefile containing pipe data
 - a. The shapefile must comply with the format described
2. Login to the LOGSTOR Pipe Invest Platform
3. Click "Add Dataset"
 - a. Add the zip compressed shapefile
4. Attach file
5. Upload file
6. Confirm dataset – complete
 - a. The data are analyzed and a report is generated

Step 1: Create a shapefile containing pipe data

In the first step you need to collect your data model in a shapefile. The needed data consist of:

FieldName	Data type	Description	Codetable name	Default value	Required
Id	string	Unique identification of the pipe			Yes
Dimension	int	Outer dimension of the pipe		1 (mm)	Yes
Location	int	Indication of zone the pipe is located in based on the code table	LocationZone	2 (City/zone)	Yes
CreateDate	date format	Date establishment of the pipe		Now (time at import)	Yes
Type	int	Indication type of pipe is based on the code table pipe type	PipeType	3 (Distribution pipe)	Yes
Construct	int	Indicates the type of construction the pipe has	ConstructionType	2 (Pre-insulated)	Yes
Length	decimal	The length of the pipe		1 (meter)	Yes

FieldName	Data type	Description	Codetable name	Default value	Required
Geometry	geometry	Coordinates for where the pipe is located			Yes
Describe	string	Description of the pipe shown on the map			No
IsolationDimension	int	Indicates dimension of insulation on the pipe in whole millimeters		1 (mm)	Yes
IsolationClass	int	The isolation class of the pipe	IsolationClass	0 (Unknown)	Yes
System	int	What kind of pipe is it	PipeSystem	0 (Unknown)	Yes
JointCount	int	Amount of joints of a pipe		2 (joints in each end)	Yes
MuffType	int	Kind/type of muffs used on the pipe (mostly used if more than one kind)	MuffType	0 (Unknown)	Yes

Data model pipe: Code table description

Name	Value	Description
LocationZone	0	Unknown
	1	Country
	2	Town
	3	City
	4	InnerCity

Name	Value	Description
PipeType	1	Production pipes
	2	Transmission pipe
	3	Distribution pipe
	4	Stikledning/ Services pipe

Name	Value	Description
MuffType	0	Unknown
	1	Welded
	2	Cross linked PE
	3	Non cross linked PE
	4	Steel joint
	5	Shrink Wraps
	6	Kilemuffer (PolymER)

Name	Value	Description
IsolationClass	0	Unknown
	1	Serie 1
	2	Serie 2
	3	Serie 3
	4	Serie 4

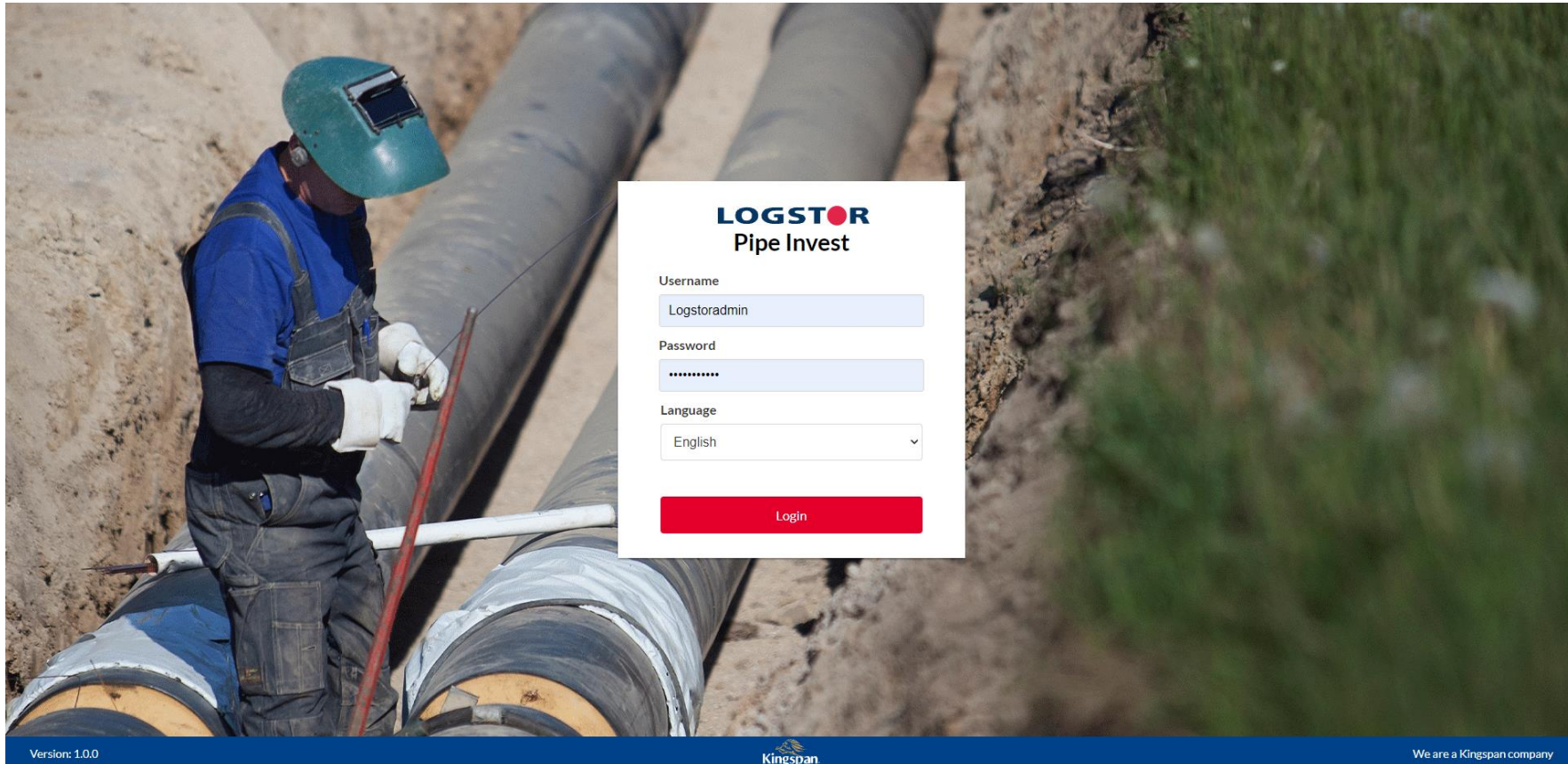
Name	Value	Description
ConstructionType	1	Canal
	2	Pre-insulated

Name	Value	Description
PipeSystem	0	Unknown
	1	AluFlextra
	2	CuFlex
	3	Enkelt
	4	PexFlextra
	5	Twin
	6	TwinAluFlex
	7	SteelFlex
	8	Steel (bonded pipes)

Data model pipe: Format description

Name	Value	Examples	Description
date format (string)	DD-MM-YYYY	15-11-1974	Date
	DDMMYYYY	15111974	
	YYYY	1974	Automatically becomes the 1/1-year
	YYYY-MM-DD	15-11-1974	

Step 2: Login to the LOGSTOR Pipe Invest Platform
Use your profile details to login.



The image shows a worker in a blue uniform and green helmet working on large pipes in a trench. A login form is overlaid on the image, featuring the LOGSTOR Pipe Invest logo and fields for Username, Password, and Language. The Username field contains 'Logstoradmin', the Password field contains '.....', and the Language dropdown is set to 'English'. A red 'Login' button is at the bottom of the form.

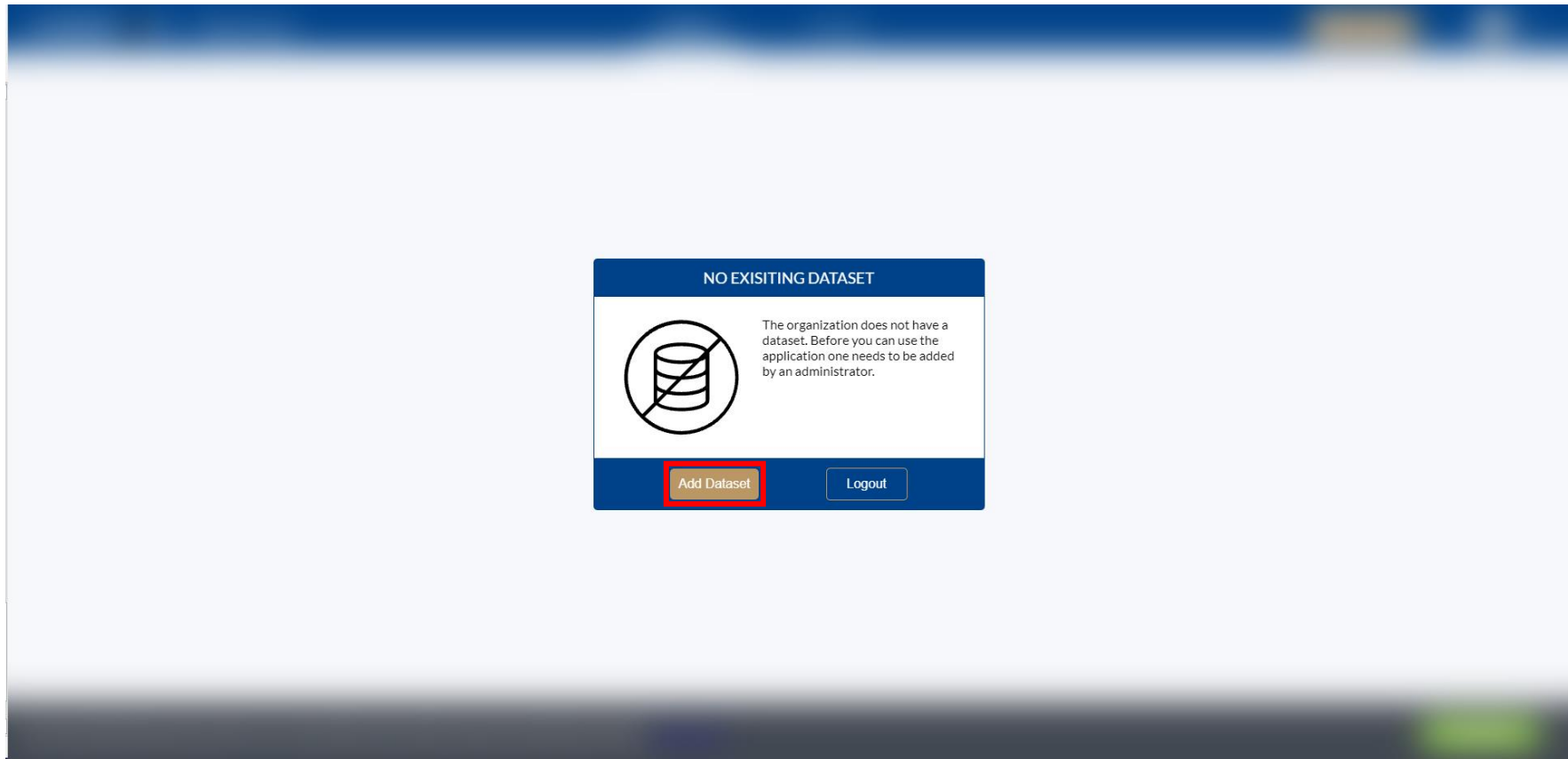
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Step 3: Click “Add Dataset”

After you have logged in for the first time, you will be met by the following pop-up window. Click “Add Dataset”.



Step 4: Attach file

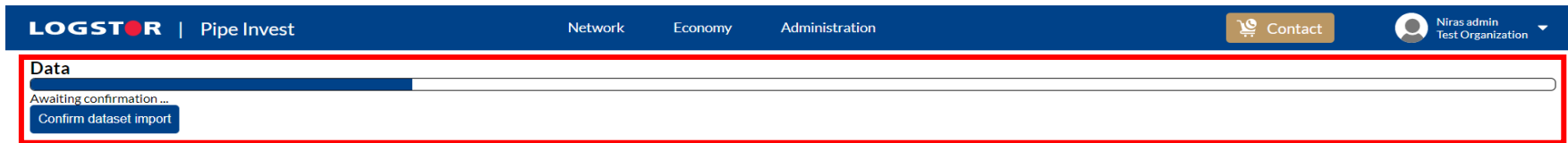
Click "Upload one .zip file", locate your zip shapefile of the pipe data on your local drive and upload the file.



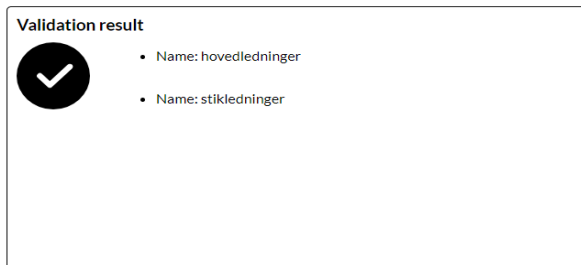
The screenshot shows the top navigation bar of the LOGSTOR Pipe Invest application. The navigation bar is dark blue and contains the following elements from left to right: the LOGSTOR logo, the text 'Pipe Invest', three menu items 'Network', 'Economy', and 'Administration', a 'Contact' button with a magnifying glass icon, and a user profile dropdown menu for 'Niras admin Test Organization'. Below the navigation bar, the main content area is white. On the left side, there is a 'Data' section with a 'New dataset' link. A red rectangular box highlights a button labeled 'Upload one .zip file' within this section.

Step 5: Upload file

After locating your zip shapefile and uploading it, a validation of the file will start.



The screenshot shows the top navigation bar of the LOGSTOR | Pipe Invest application. The navigation bar includes the logo, menu items for Network, Economy, and Administration, a Contact button, and a user profile dropdown for 'Niras admin Test Organization'. Below the navigation bar, a red-bordered box highlights a 'Data' section. This section contains a progress bar and the text 'Awaiting confirmation ...'. A blue button labeled 'Confirm dataset import' is positioned below the progress bar.



The screenshot shows a 'Validation result' section. It features a circular icon with a white checkmark on a black background. To the right of the icon, there is a list of two items:

- Name: hovedledninger
- Name: stikledninger

Step 6: Confirm dataset - complete

After the validation has been completed, a report of the import is shown and you are ready to use Pipe Invest. You can see the separate guide "User manual" for an introduction to Pipe Invest, which can be found in the "Help"-tab in the menu dropdown.

The screenshot displays the LOGSTOR Pipe Invest interface. At the top, a navigation bar includes the logo, menu items (Network, Economy, Administration), a Contact button, and a user profile for 'Niras admin Test Organization'. Below the navigation bar, the 'Data' section is highlighted with a blue bar and the status 'Complete'.

The main content area features three summary cards, each with an icon and a list of details:

- Validation result:** Represented by a checkmark icon. It lists:
 - Name: hovedledninger
 - Name: stikledninger
- Import result:** Represented by a download icon. It lists:
 - Name: hovedledninger
 - Feature Count: 11725
 - Name: stikledninger
 - Feature Count: 10525
- Analysis result:** Represented by an icon of a person with a gear. It lists:
 - Name: hovedledninger
 - Name: stikledninger

The bottom of the interface shows the version '1.0.0', the Kingspan logo, and the text 'We are a Kingspan company'.