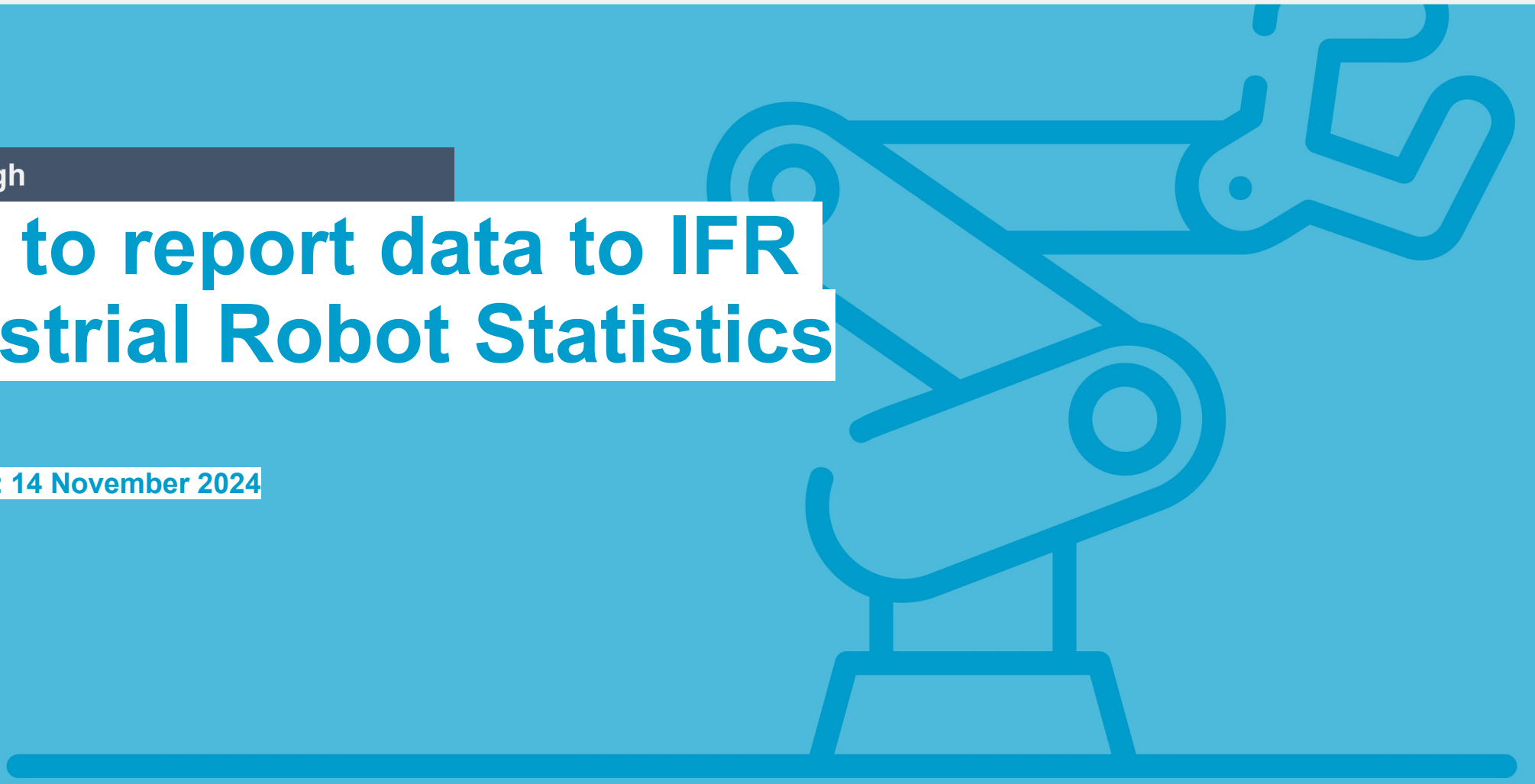
IFR International Federation of Robotics

Walkthrough

How to report data to IFR Industrial Robot Statistics

This version: 14 November 2024



4 options to report data

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Choose your favorite option from the following alternatives:

1. Submit Excel files via e-mail (statistics@ifr.org)
2. Upload CSV files to my.worldrobotics.org
3. Enter data manually on my.worldrobotics.org
4. Push data through API

Note: The additional surveys on “collaborative robots” and “mobile manipulators” currently require the submission of Excel files.

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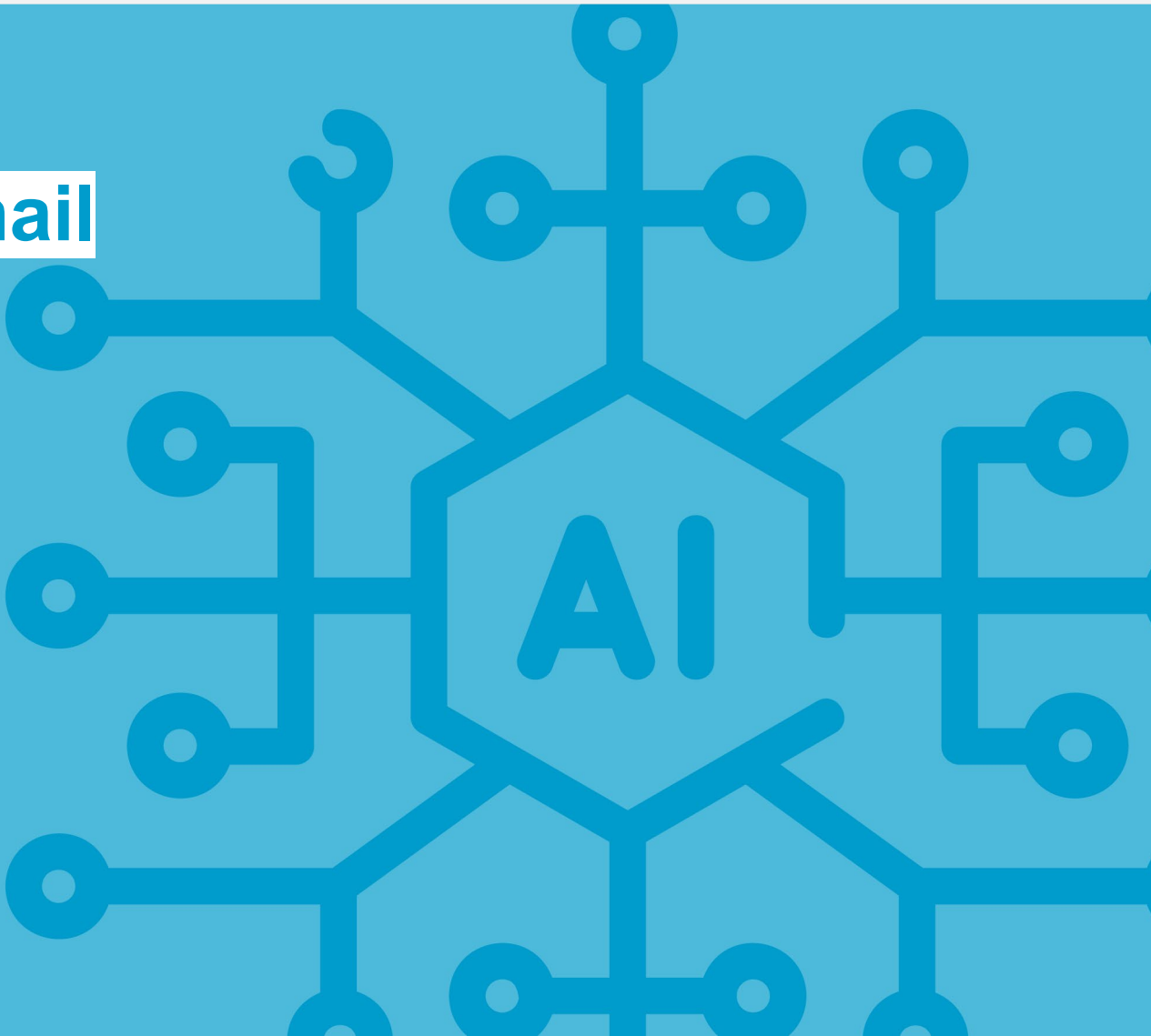
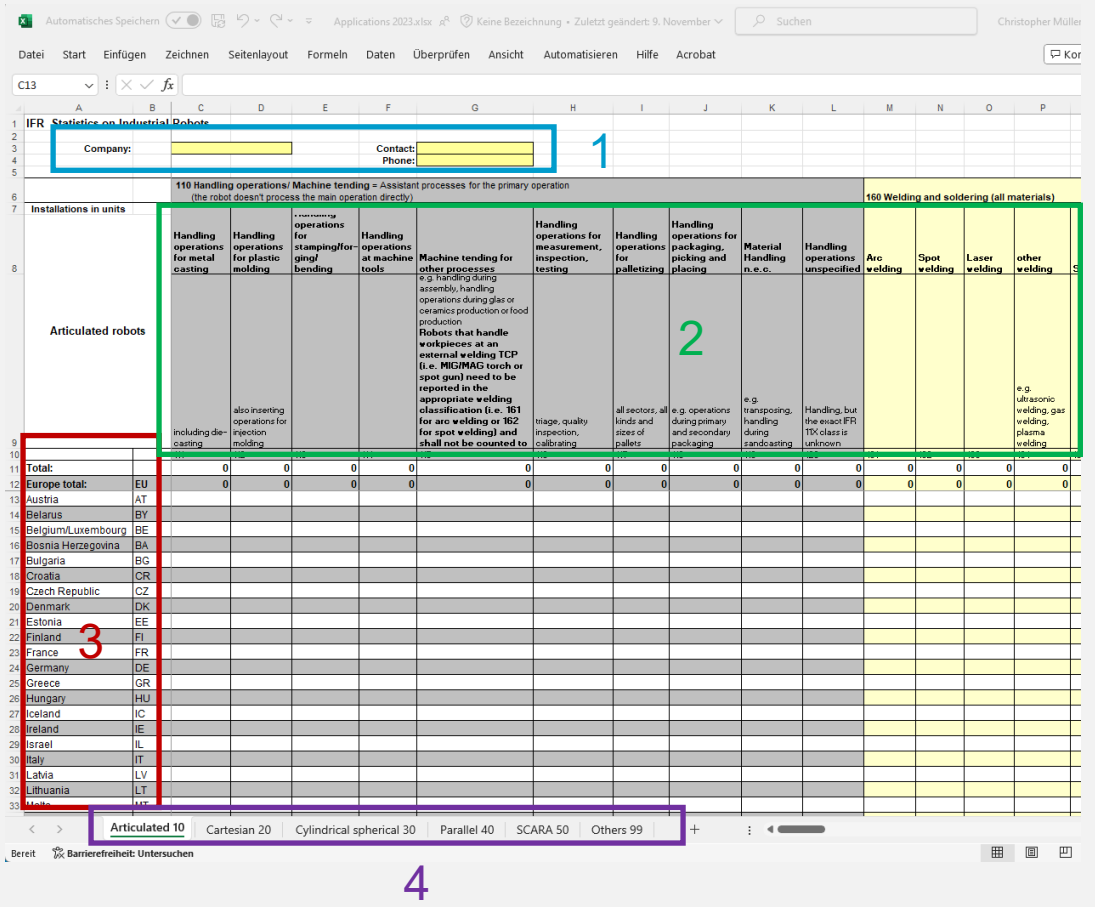
1 Submit Excel files via e-mail



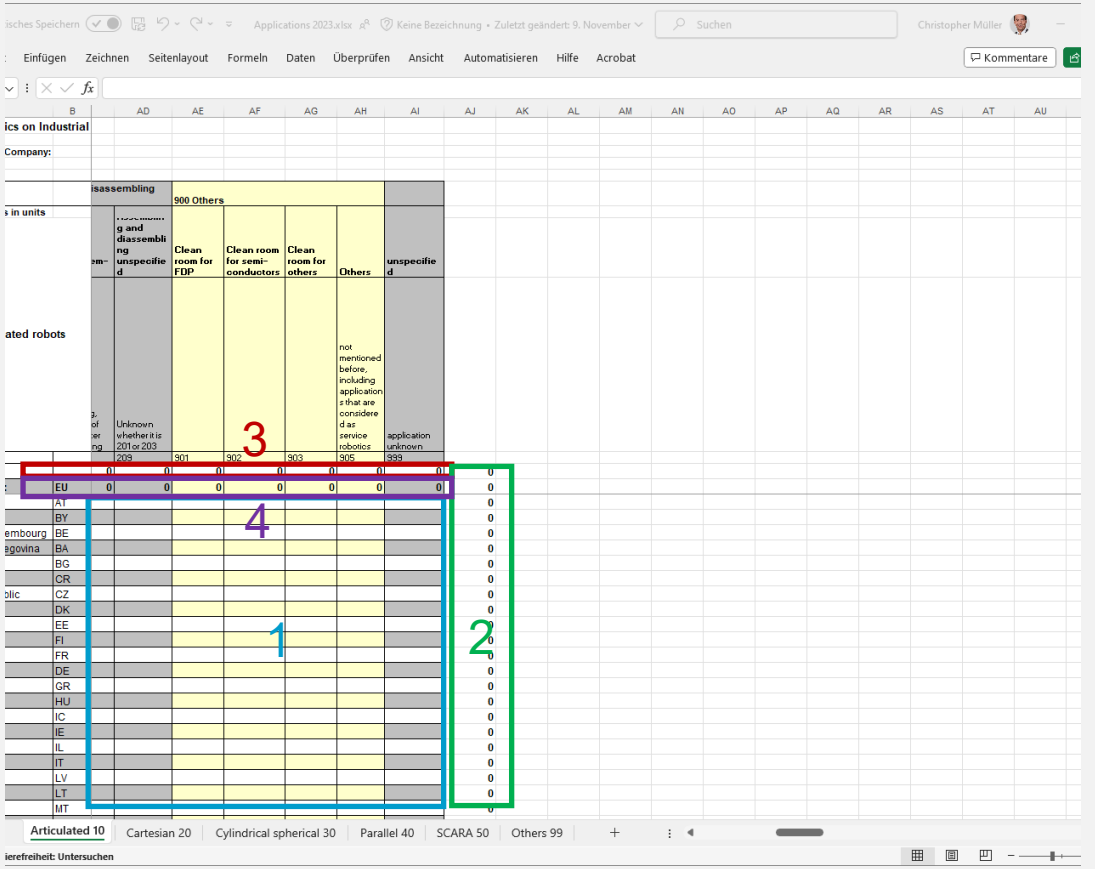
1 Excel files

- Use the provided Excel sheets “Applications 2024.xlsx” and “Industries 2024.xlsx”
- 1) Please tell us who the sender and contact for questions is
- 2) Columns follow IFR application (or industry) classes and offer a short definition (full definitions provided in separate document)
- 3) Rows follow IFR geography classes
- 4) There are 6 sheets, each representing one IFR industrial robot type class



1 Excel files

- 1) Enter the number of installed robots in the calender year (0 may be omitted)
- To assist you, the sheet computes some control sums:
- 2) The right-hand side column offers the total by geography unit across all applications/industries
- 3) The top row contains the total by application across all territories
- 4) There are sub-totals for the continents (Asia, The Americas, Europe, Africa)



1 Excel files

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Please note:

- Only **natural numbers** are allowed (no decimals or negatives)
- You can only report to lowest-level classes. **You cannot report into aggregate classes** (e.g. application 110 as the aggregate of all handling/machine tending applications). If you do not know the lowest level class, please use the corresponding "unspecified" class (e.g. if you know the robot is used for handling, but not the exact application, report it to class 120 "Handling operations unspecified").
- **Do not alter the structure of the file** as it is processed semi-automatically. That is:
  - Do not shuffle the order of the sheets
  - Do not rename sheets
  - Do not add, remove or shuffle rows or lines

When done, submit the Excel files via e-mail to statistics@ifr.org.

This is also your contact for questions.

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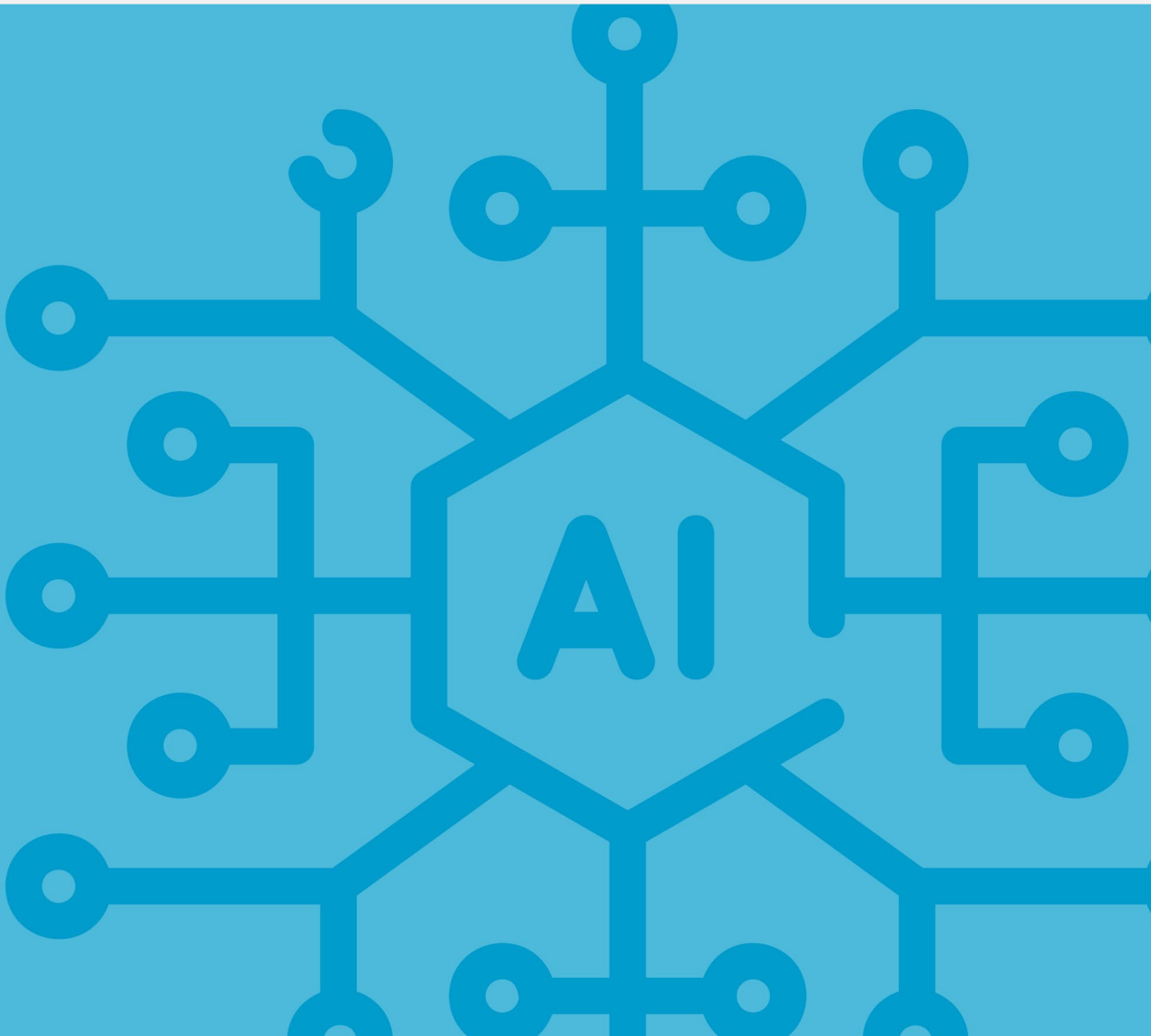
2 Upload CSV file to my.worldrobotics.org



2 Upload CSV file

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- **Recommended if you have a well-maintained database** of your company's robot installations that allows you to extract data compliant with IFR classes.
- **Preparation** (before you submit): Configure your system to export separate CSV files for each *type x application* and each *type x industry* (i.e. one CSV file corresponds to one sheet in the Excel file). **Name files according to this rule**:

  [YYYY]_[MM]_[APPIND|APPLICATION|INDUSTRY]_[COMPANY-CODE]_[ROBOTTYPE-CODE].csv

  where:

  [YYYY] = calender year the data refers to

  [MM] = currently always 00 (double zero)

  [APPIND|APPLICATION|INDUSTRY] = currently either APPLICATION or INDUSTRY

  [COMPANY-CODE] = the pseudonymous assigned by IFR Statistical Dpt.

  [ROBOTTYPE-CODE] = the IFR robot type code
  (10 = articulated, 20 = cartesian, 30 = cylindrical, 40 = parallel, 50 = SCARA, 99 = others)

  Example: 2024_00_application_A123_10.csv

2 Upload CSV file

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- Each file contains data according to the following format:
- One line for each datapoint (i.e. one line corresponds to one cell in the Excel file)

1. Reporting by Applications:

   [COUNTRY-CODE];[APPLICATION-CODE];[INSTALLED UNITS]

   Example:
   DE;111;10
   KR;118;4

2. Reporting by Industries:

   [COUNTRY-CODE];[INDUSTRY-CODE];[INSTALLED UNITS]

   Example:
   DE;291;10
   KR;162;4

2 Upload CSV file

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[COUNTRY-CODE]: According to IFR geography classification (see documentation, no aggregate classes)

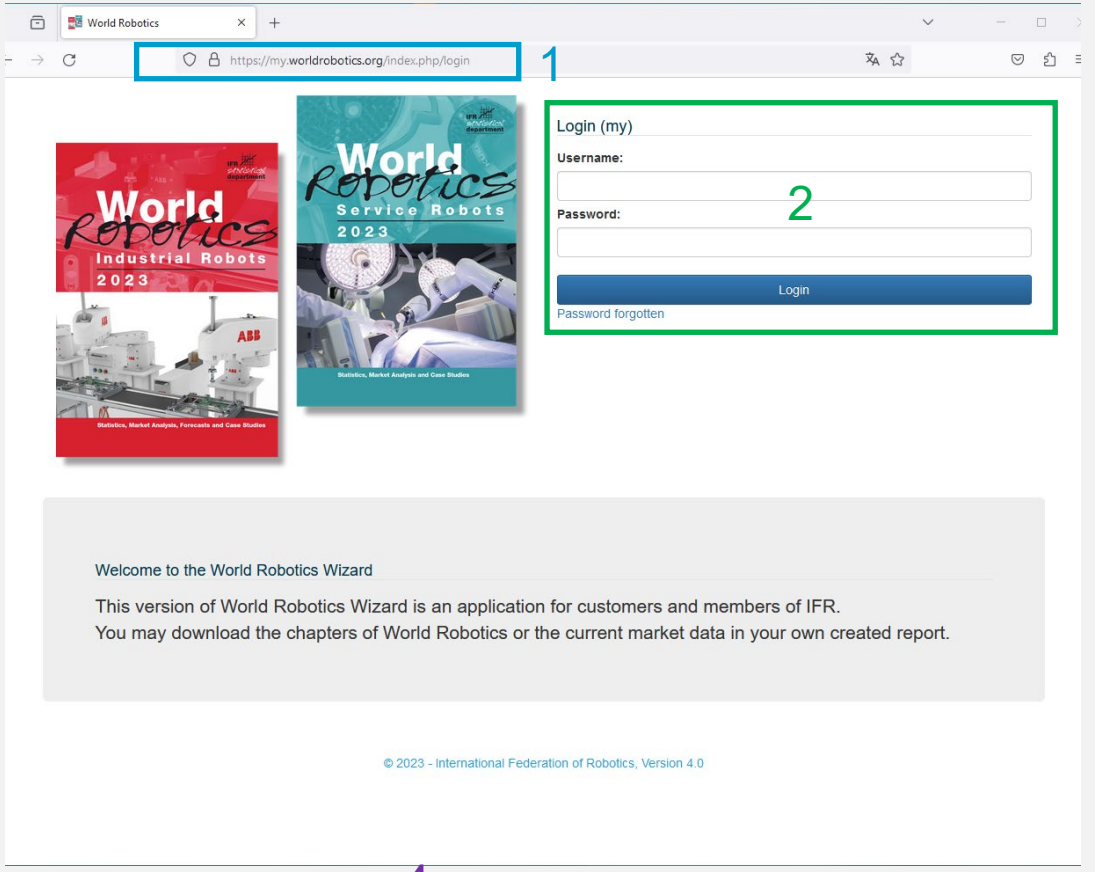
[APPLICATION-CODE]: According to IFR application classification (see documentation, no aggregate classes)

[INDUSTRY-CODE]: According to IFR industry classification (see documentation, no aggregate classes)

[INSTALLED UNITS]: Number of industrial robots newly installed in the corresponding year

2 Upload CSV file

- After preparing the CSV files:
- 1) Go to my.worldrobotics.org
- 2) Log in
- Use “password forgotten” if necessary.
- If you do not have an account yet, please contact IFR Stat. Dpt. (statistics@ifr.org or by phone)
- If you need support, please contact IFR Stat. Dpt.



2 Upload CSV file

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3) Click “Dispatches” to see the “List of Dispatches” – your company’s data submissions to the IFR. It is structured as follows:

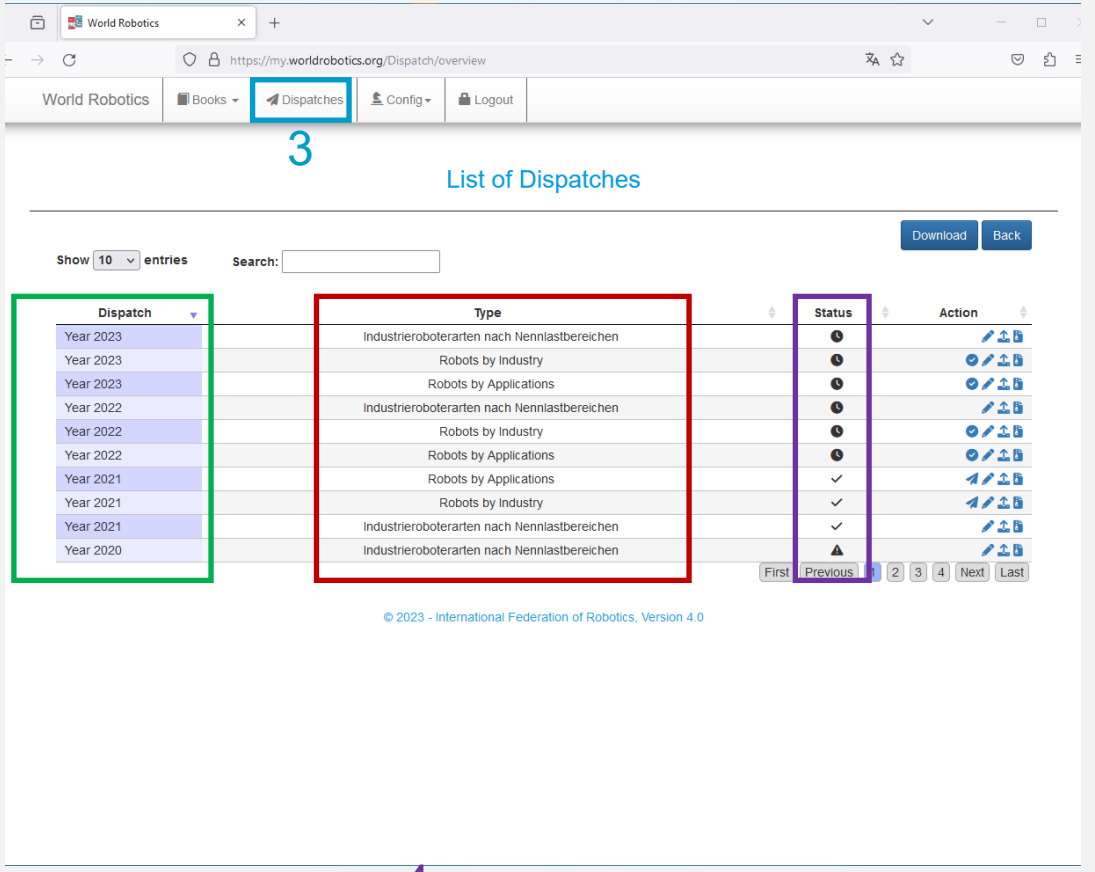
“Dispatch”: The calender year of the data

“Type”: Type of dispatch (industry or application)

- do not confuse with kinematics (“robot type”)
- companies reporting payloads to the German statistics will find “payloads”, too.

“Status”: Status of this dispatch

- verified and submitted to IFR
- pending (verified but not submitted)
- not verified



2 Upload CSV file

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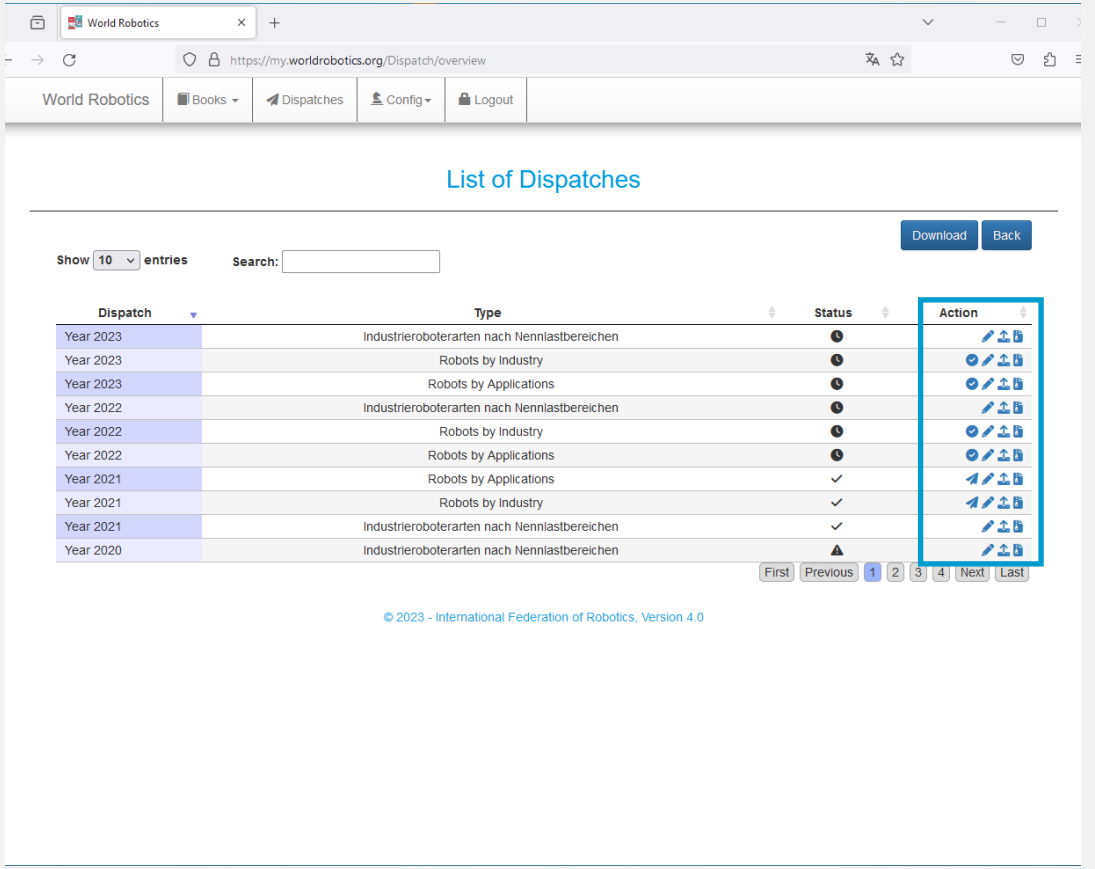
- “Action”: Things you can do
  - edit data in manual editor
  - upload CSV file
  - download your latest dispatch
  - verify dispatch
  - send to IFR

- Verification means that the system does the basic plausibility check

-Upon success, the symbol will switch to “send to IFR”

-Upon failure, you will receive a report about the mismatches that need to be fixed



2 Upload CSV file

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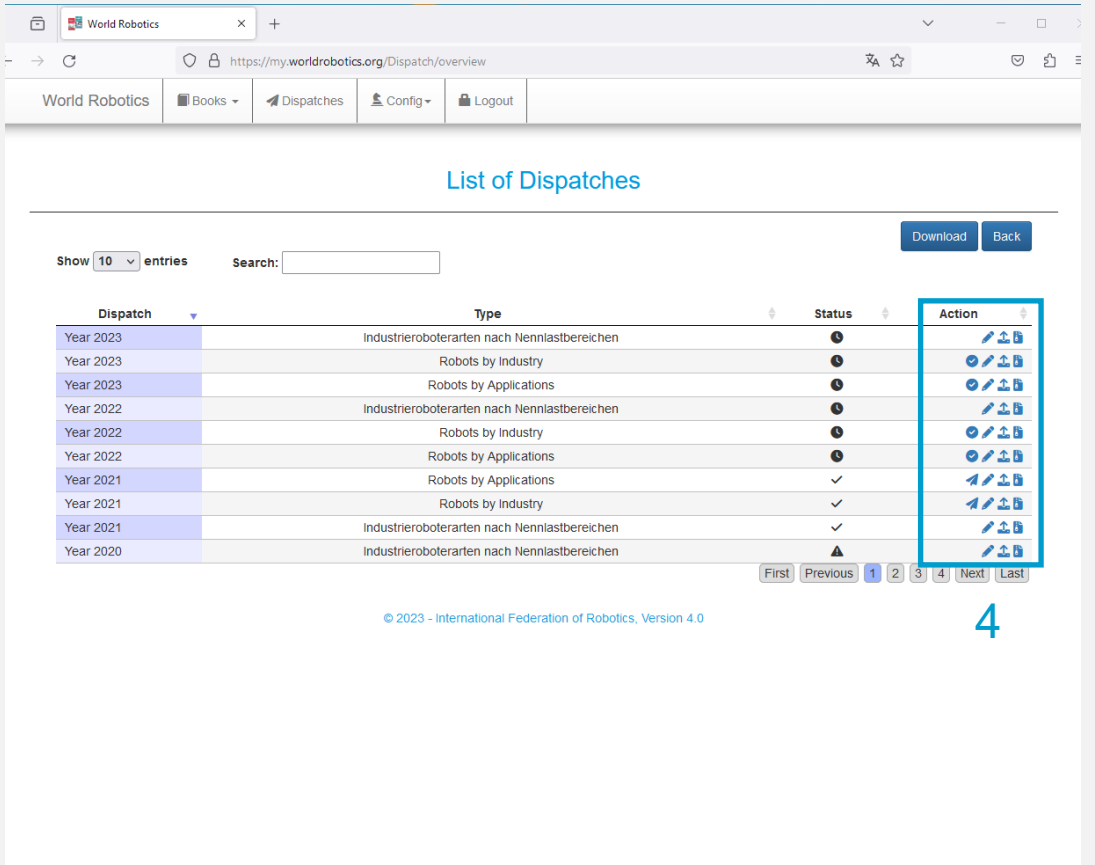
4) To upload your CSV files, click the upload button for the corresponding year and dispatch type.



2 Upload CSV file

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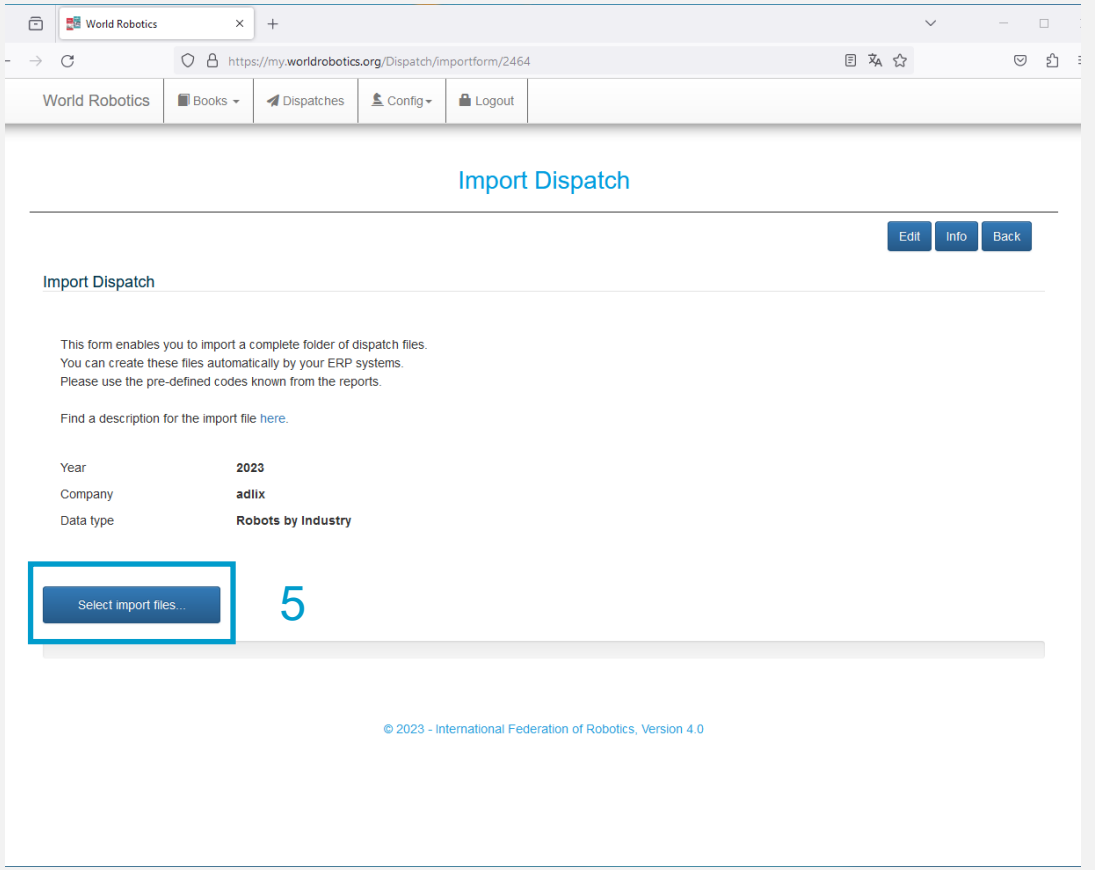
5) Click “Select import files” and select the CSV files according to the year and dispatch type.

- You can upload all CSV files of the same dispatch type and year at once

- The protocol will tell you if formal errors were found (i.e. wrong country codes or wrong application or industry codes)

- The system will reject files with incorrect name (see instructions for naming of files)



2 Upload CSV file

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6) After uploading all data, **click the "Verify" button** to perform the basic plausibility check.

-The total by geography class and robot type must be the same for the dispatch by application and by industry

-Upon failure, the error report will show the identified mismatches. You can fix the CSV files and upload again or click to make the corrections in the built-in editor.

7) Upon success, **click to submit** the data to IFR.

YOU'RE DONE. THANK YOU!

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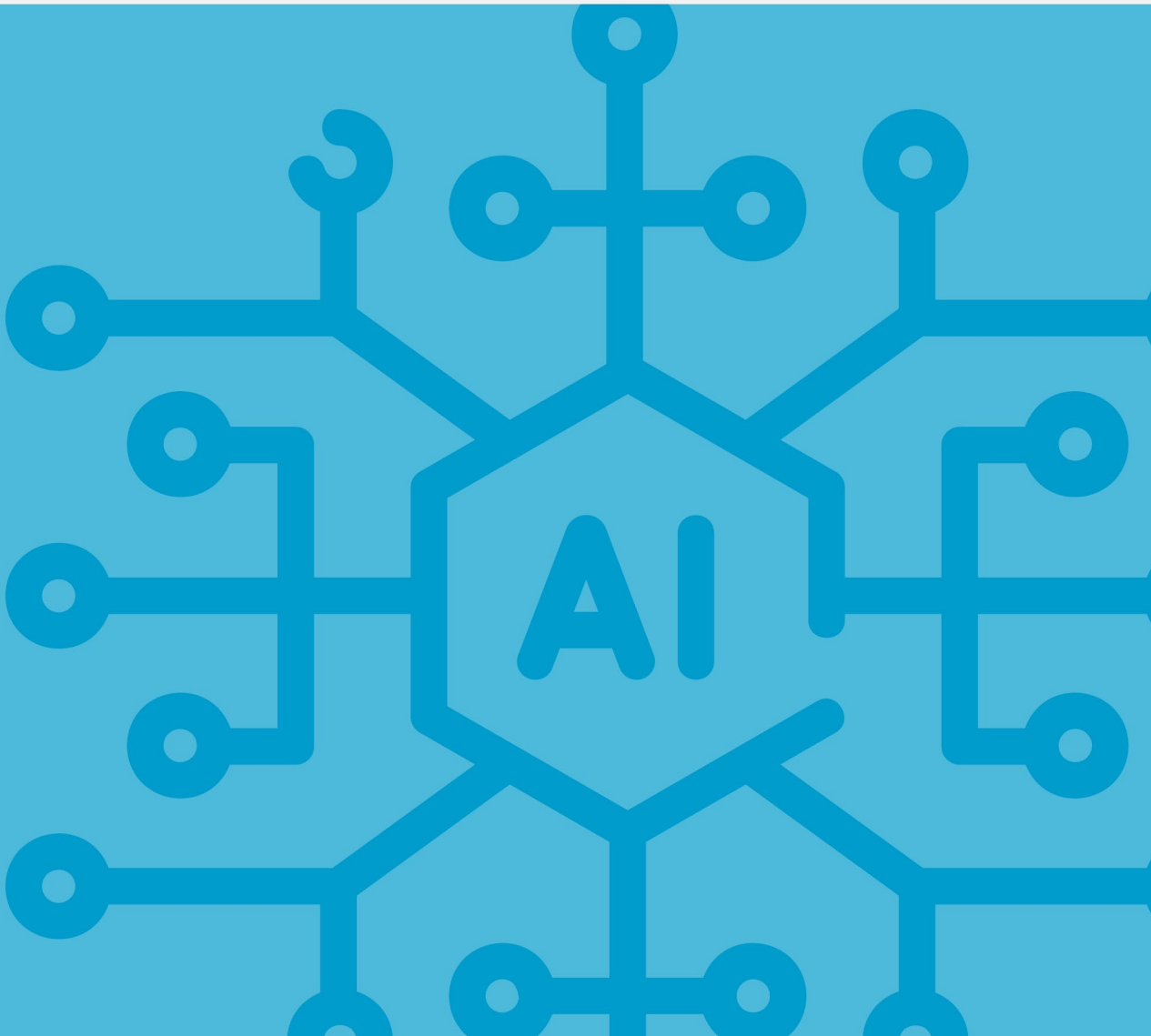
3 Enter data manually on my.worldrobotics.org



3 Enter data manually

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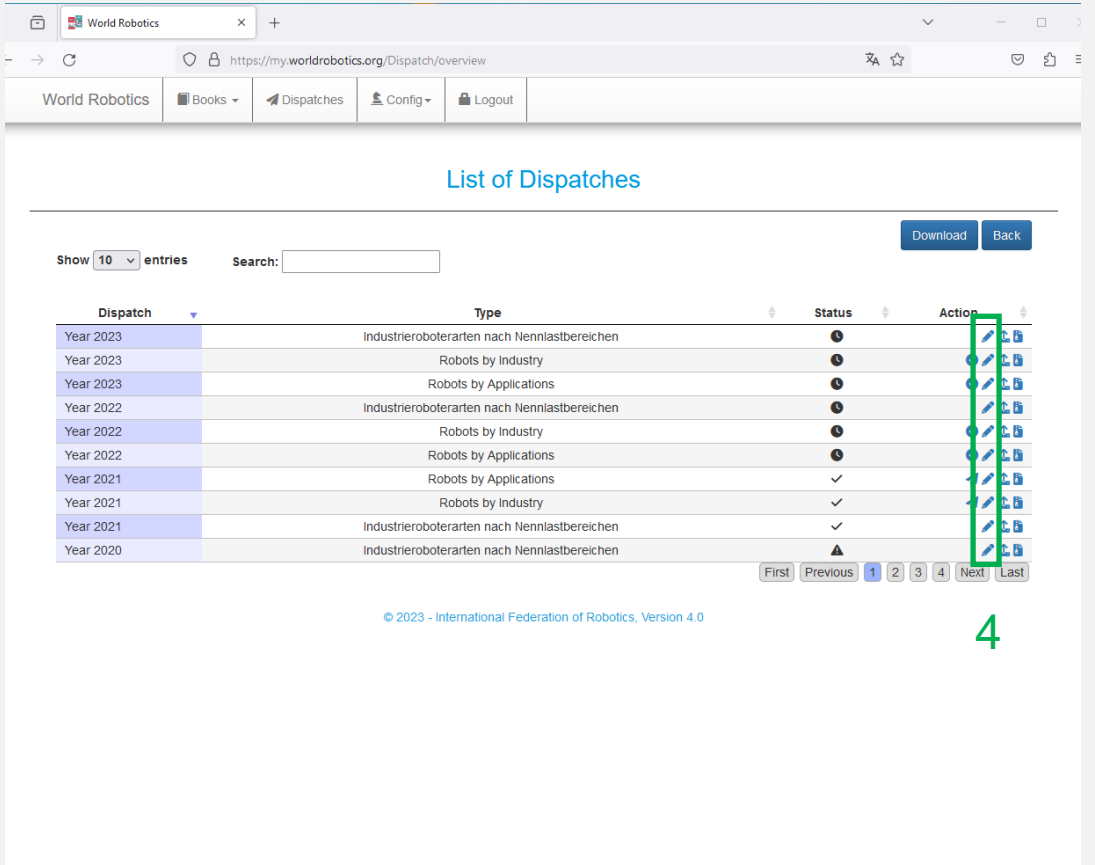
- **Recommended for very small companies** or companies active in a limited environment (few countries, few applications, few industries) that do not want to send Excel files.
- Log in to my.worldrobotics.org, and click “dispatches” (see steps 1 to 3 in the “upload CSV” section)
- Use the pen symbol to open the editor



3 Enter data manually

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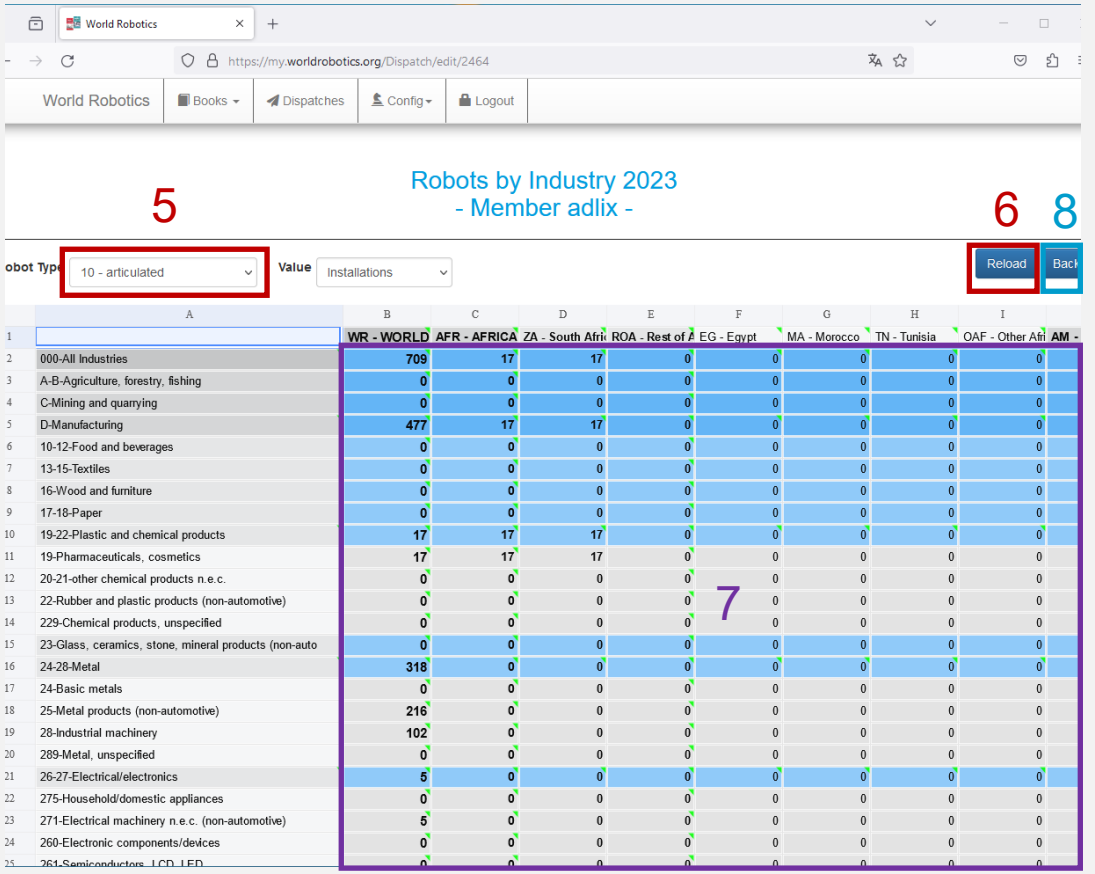
5+6) Choose the appropriate robot type and click “Reload” to switch to the corresponding table

7) Enter your data

Note: You can only enter data at the lowest hierarchy levels. It is not possible to enter data on aggregate levels. If your input is not accepted, it is most likely because you tried to enter data on an aggregate level.

8) When finished, click “back”

9) Verify and send to IFR as described in steps 6 and 7 in the “upload CSV” section.



	WR - WORLD	AFR - AFRICA	ZA - South Afri	ROA - Rest of A	EG - Egypt	MA - Morocco	TN - Tunisia	OAF - Other Afri	AM -
000-All Industries	709	17	17	0	0	0	0	0	
A-B-Agriculture, forestry, fishing	0	0	0	0	0	0	0	0	
C-Mining and quarrying	0	0	0	0	0	0	0	0	
D-Manufacturing	477	17	17	0	0	0	0	0	
10-12-Food and beverages	0	0	0	0	0	0	0	0	
13-15-Textiles	0	0	0	0	0	0	0	0	
16-Wood and furniture	0	0	0	0	0	0	0	0	
17-18-Paper	0	0	0	0	0	0	0	0	
19-22-Plastic and chemical products	17	17	17	0	0	0	0	0	
19-Pharmaceuticals, cosmetics	17	17	17	0	0	0	0	0	
20-21-other chemical products n.e.c.	0	0	0	0	0	0	0	0	
22-Rubber and plastic products (non-automotive)	0	0	0	0	0	0	0	0	
229-Chemical products, unspecified	0	0	0	0	0	0	0	0	
23-Glass, ceramics, stone, mineral products (non-auto	0	0	0	0	0	0	0	0	
24-28-Metal	318	0	0	0	0	0	0	0	
24-Basic metals	0	0	0	0	0	0	0	0	
25-Metal products (non-automotive)	216	0	0	0	0	0	0	0	
28-Industrial machinery	102	0	0	0	0	0	0	0	
289-Metal, unspecified	0	0	0	0	0	0	0	0	
26-27-Electrical/electronics	5	0	0	0	0	0	0	0	
275-Household/domestic appliances	0	0	0	0	0	0	0	0	
271-Electrical machinery n.e.c. (non-automotive)	5	0	0	0	0	0	0	0	
260-Electronic components/devices	0	0	0	0	0	0	0	0	
261-Semiconductors, LCD, LED	0	0	0	0	0	0	0	0	

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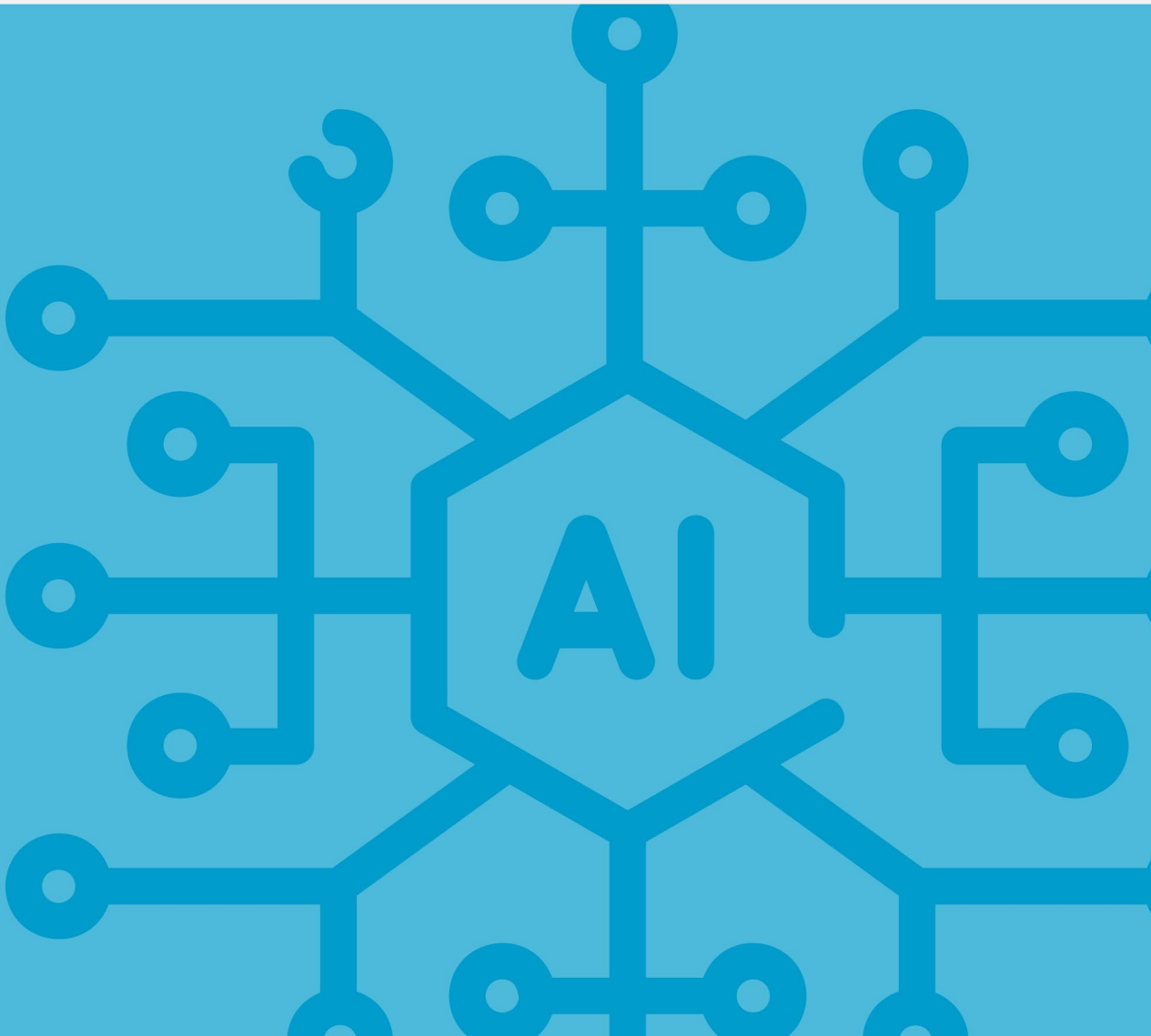
4 Push data through API



4 Push data through API

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- Recommended for **power users with a well-maintained database** of your company's robot installations that allows you to compile data compliant with IFR classes.
- Please contact IFR Statistical Department through your preferred means of communication as we will need to cooperate closely during the setup process.