

# Refugee Datathon Munich

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*Nerds4Refugees*

28 February 2018

ynux, robbi5

# Agenda

1 The Story of the Refugee Datathon Munich

2 Open Data

3 Data Pipelines

4 The Project and the Real World

5 Refugees and the IT Community

In 2015,  
thousands of  
refugees arrived  
in Munich and  
were welcomed



# IT people also wanted to contribute

## But how?

- Many ideas: Apps, teaching, internet access, matching platforms ...
- We knew some pro refugee activists
- We saw them struggling to get basic data: Asylum applications, decisions
- And struggling to extract visualizations from it
- We worked in 4 „refugee datathons“ and created a data pipeline for them

Focusing on people - offering security. Creating opportunities. Living change.

[Welcome page](#) → [Information collection](#) → [Statistics](#) → [Asylum figures](#)

[Current news](#)

[Publications](#)

[Statistics](#)

→ [Asylum figures](#)

[Integration course figures](#)

[Number of immigrants](#)

[Figures on the EU Blue Card](#)

[Migration monitoring](#)

[Voluntary return \(REAG/GARP\)](#)

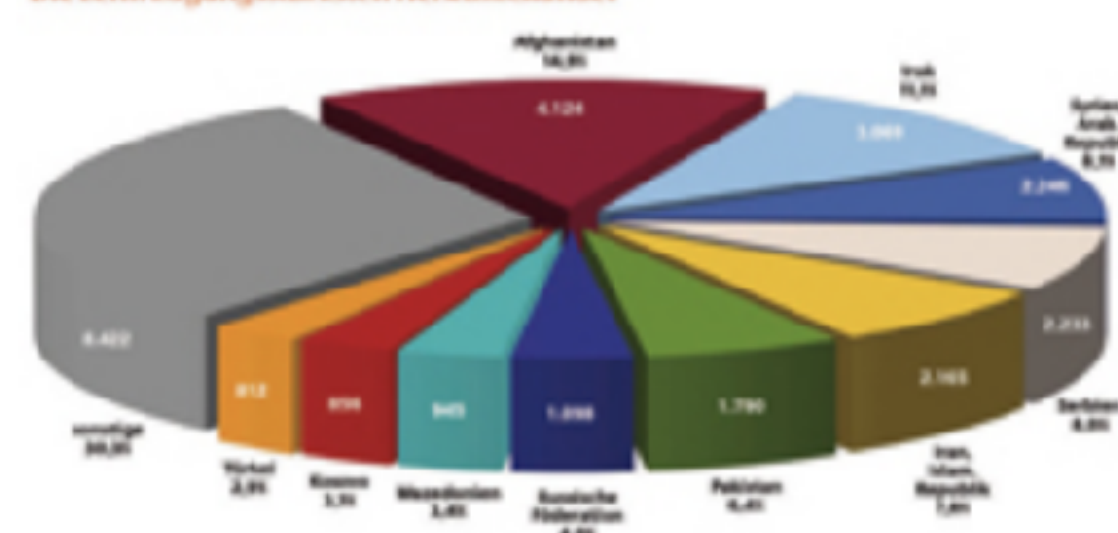
[FAQ](#)

[Legal bases](#)

[Pictures and Videos](#)

## Asylum figures

Die zehn zugangsstärksten Herkunftsländer



### The national figures on asylum

The Federal Office publishes data updated on a monthly basis concerning developments in the asylum applications filed in Germany, on the ten countries of origin with the highest number of applicants arriving, as well as on the decisions made by the Federal Office concerning the asylum applications, and statistical data on transfer requests that have been filed in the Dublin Procedure. The statistics also provide information on how the data have developed in comparison to previous years.

In accordance with Article 4 of Regulation (EC) NO 862/2007 of the European Parliament and of the Council on Community statistics on migration and international protection, the Federal Office is the national data supplier for the European Commission (Eurostat) in the field of asylum statistics. You will find links to the wording of the Regulation and to Eurostat's online database in the right-hand column of the German-language version of this article.

GET OPEN DATA!  
GET DATA OPEN!

# Get Data: Use the Freedom of Information Law

- There's a law requiring ministries to publish data (like the Freedom of Information Act)
- There's a web portal made by open data activists to make such inquiries simple: <https://fragdenstaat.de> (*ask-the-government*)

The screenshot shows the homepage of the FragDenStaat website. At the top, there are navigation links: "Über uns", "Blog", "Hilfe", and "Spenden" (highlighted in red). Below these is the site logo "Frag den Staat" and a search bar with the text "Angefragt Stellen Sie eine Anfrage!". The main content area features a large banner with the text "Was ist FragDenStaat?" and "Jede Person hat das Recht auf Informationen. FragDenStaat hilft Ihnen, Ihr Recht wahrzunehmen." Below this is a search bar with the text "Suchen Sie in 24803 Anfragen und 12444 Behörden:" and a search button "Suchen!". A video player overlay shows the text "Informationsfreiheit + FragDenStaat.de" and a play button. At the bottom, a section titled "Wie funktioniert FragDenStaat?" shows a three-step process:

1. Sie stellen eine Anfrage. Wir leiten diese an die zuständige Behörde weiter.
2. Sie erhalten eine Mail, sobald die Behörde auf Ihre Anfrage reagiert.
3. Die Antwort wird für Sie und auch für andere öffentlich einsehbar.

# Get Data: Use the Freedom of Information Law

- We kept asking for the refugee data until the ministry started publishing it monthly on their webpage
- \o/

[Über uns](#) [Blog](#) [Hilfe](#) [Spenden](#)

 **Frag den Staat** [Angefragt](#) [Stellen Sie eine Anfrage!](#)  [Anmelden](#)

## Rohdaten hinter monatl. Asylgeschäftsstatistik, ab Anfang Mai 2016

**Anfrage an:**  
[Bundesamt für Migration und Flüchtlinge](#)

**Verwendete Gesetze:**

- [Verbraucherinformationsgesetz Bund \(VIG\)](#)
- [Umweltinformationsgesetz Bund \(UIG\)](#)
- [Informationsfreiheitsgesetz Bund \(IFG\)](#)

**Status dieser Anfrage:**  
Anfrage erfolgreich

**Zusammenfassung der Anfrage**  
Die Rohdaten, auf welchen folgende Dokumente basieren: monatl. Asylgeschäftsstatistik, <http://www.bamf.de/DE/Infothek/Statis...>  
Wie auf die Anfrage <https://fragdenstaat.de/anfrage/rohda...> .

Danke,

**3 Follower**

Anfrage teilen

- [Twitter](#)
- [Facebook](#)

Feeds

- [RSS-Feed](#)
- [Atom-Feed](#)

Kurz-URL  
<https://fragdenstaat.de/a/17718>

### Korrespondenz

|                |                                                                                |                            |
|----------------|--------------------------------------------------------------------------------|----------------------------|
| <b>Von</b>     | Sun-Tsung Kim                                                                  | Sun-Tsung Kim              |
| <b>Betreff</b> | Rohdaten hinter monatl. Asylgeschäftsstatistik, ab Anfang Mai 2016<br>[#17718] | <a href="#">28.08.2016</a> |
| <b>Datum</b>   | <a href="#">28. August 2016 14:58</a>                                          | <a href="#">09.10.2016</a> |
|                |                                                                                | <a href="#">12.11.2016</a> |

# But our data is a PDF table wasteland

## BUNDESAMT FÜR MIGRATION UND FLÜCHTLINGE

### Antrags-, Entscheidungs- und Bestandsstatistik

Berichtszeitraum: 01.12.2017 - 31.12.2017

bezogen auf: **Personen**

Bereich: Bundesgebiet gesamt

| Aufschlüsselung nach Herkunftsländern | LS  | ASYLANTRÄGE |                    |                     | ENTSCHEIDUNGEN über Asylanträge |                                                                 |                                               |                                                     |                                                                     |                                                       |                                    | ANHÄNGIGE VERFAHREN        |                             | ENTSCHEIDUNGEN über Erstanträge                                 |                                               |                                                     |                                                                     |                                                       |                                                       | ENTSCHEIDUNGEN über Folgeanträge                                |                                               |                                                     |                                                                     |                                                       |                         |                                                       |
|---------------------------------------|-----|-------------|--------------------|---------------------|---------------------------------|-----------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------|------------------------------------|----------------------------|-----------------------------|-----------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------|-------------------------|-------------------------------------------------------|
|                                       |     | insgesamt   | davon Erst-anträge | davon Folge-anträge | insgesamt                       | Anerkennungen als Asylbe-rechtigte (Art. 16a und Familien-Asyl) | Anerkennungen als Flüchtling gem. § 3 I AsylG | Ge-währung von subsi-diärem Schutz gem. § 4 I AsylG | Fest-stellung eines Abschie-bungs-verbotes gem. § 60 V/VII AufenthG | Ableh-nungen (unbegr. abgel./ offens. unbegr. abgel.) | sonstige Verfah-renser-ledigun-gen | aufgrund von Erst-anträgen | aufgrund von Folge-anträgen | Anerkennungen als Asylbe-rechtigte (Art. 16a und Familien-Asyl) | Anerkennungen als Flüchtling gem. § 3 I AsylG | Ge-währung von subsi-diärem Schutz gem. § 4 I AsylG | Fest-stellung eines Abschie-bungs-verbotes gem. § 60 V/VII AufenthG | Ableh-nungen (unbegr. abgel./ offens. unbegr. abgel.) | formelle Verfah-renser-ledigun-gen (z.B. Rück-nahmen) | Anerkennungen als Asylbe-rechtigte (Art. 16a und Familien-Asyl) | Anerkennungen als Flüchtling gem. § 3 I AsylG | Ge-währung von subsi-diärem Schutz gem. § 4 I AsylG | Fest-stellung eines Abschie-bungs-verbotes gem. § 60 V/VII AufenthG | Ableh-nungen (unbegr. abgel./ offens. unbegr. abgel.) | kein weiteres Verfahren | formelle Verfah-renser-ledigun-gen (z.B. Rück-nahmen) |
| Spalte 1                              |     | 2           | 3                  | 4                   | 5                               | 6                                                               | 7                                             | 8a                                                  | 8b                                                                  | 9                                                     | 10                                 | 11                         | 12                          | 14                                                              | 15                                            | 16a                                                 | 16b                                                                 | 17                                                    | 18                                                    | 19                                                              | 20                                            | 21a                                                 | 21b                                                                 | 22                                                    | 23                      | 24                                                    |
| Albanien                              | 121 | 289         | 198                | 91                  | 309                             | -                                                               | -                                             | 1                                                   | 6                                                                   | 166                                                   | 136                                | 385                        | 188                         | -                                                               | -                                             | 1                                                   | 6                                                                   | 163                                                   | 54                                                    | -                                                               | -                                             | -                                                   | -                                                                   | 3                                                     | 79                      | 3                                                     |
| Bosnien und Herzegowina               | 122 | 128         | 41                 | 87                  | 106                             | -                                                               | -                                             | -                                                   | 4                                                                   | 50                                                    | 52                                 | 74                         | 37                          | -                                                               | -                                             | -                                                   | 1                                                                   | 43                                                    | 1                                                     | -                                                               | -                                             | -                                                   | 3                                                                   | 7                                                     | 48                      | 3                                                     |
| Belgien                               | 124 | -           | -                  | -                   | 1                               | -                                                               | -                                             | -                                                   | -                                                                   | 1                                                     | -                                  | 1                          | -                           | -                                                               | -                                             | -                                                   | -                                                                   | 1                                                     | -                                                     | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                       | -                                                     |
| Bulgarien                             | 125 | -           | -                  | -                   | -                               | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                  | 3                          | -                           | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                                     | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                       | -                                                     |
| Kroatien                              | 130 | -           | -                  | -                   | -                               | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                  | 1                          | 1                           | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                                     | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                       | -                                                     |
| Slowenien                             | 131 | -           | -                  | -                   | 1                               | -                                                               | -                                             | -                                                   | -                                                                   | 1                                                     | -                                  | -                          | -                           | -                                                               | -                                             | -                                                   | -                                                                   | 1                                                     | -                                                     | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                       | -                                                     |
| Griechenland                          | 134 | -           | -                  | -                   | -                               | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                  | 2                          | -                           | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                                     | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                       | -                                                     |
| Italien                               | 137 | -           | -                  | -                   | -                               | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                  | 21                         | -                           | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                                     | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                       | -                                                     |
| Lettland                              | 139 | -           | -                  | -                   | -                               | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                  | 5                          | -                           | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                                     | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                       | -                                                     |
| Montenegro                            | 140 | 64          | 16                 | 48                  | 66                              | -                                                               | -                                             | -                                                   | -                                                                   | 20                                                    | 46                                 | 27                         | 27                          | -                                                               | -                                             | -                                                   | -                                                                   | 18                                                    | 1                                                     | -                                                               | -                                             | -                                                   | -                                                                   | 2                                                     | 44                      | 1                                                     |
| Mazedonien                            | 144 | 312         | 141                | 171                 | 330                             | -                                                               | -                                             | -                                                   | 3                                                                   | 196                                                   | 131                                | 238                        | 183                         | -                                                               | -                                             | -                                                   | 3                                                                   | 157                                                   | 12                                                    | -                                                               | -                                             | -                                                   | -                                                                   | 39                                                    | 110                     | 9                                                     |
| Moldau (Republik)                     | 146 | 140         | 105                | 35                  | 96                              | -                                                               | -                                             | -                                                   | -                                                                   | 78                                                    | 18                                 | 102                        | 4                           | -                                                               | -                                             | -                                                   | -                                                                   | 77                                                    | 6                                                     | -                                                               | -                                             | -                                                   | -                                                                   | 1                                                     | 12                      | -                                                     |
| Niederlande                           | 148 | -           | -                  | -                   | -                               | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                  | 5                          | -                           | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                                     | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                       | -                                                     |
| Norwegen                              | 149 | -           | -                  | -                   | -                               | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                  | 1                          | -                           | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                                     | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                       | -                                                     |
| Kosovo                                | 150 | 122         | 54                 | 68                  | 173                             | -                                                               | -                                             | 1                                                   | 1                                                                   | 105                                                   | 66                                 | 184                        | 85                          | -                                                               | -                                             | -                                                   | 1                                                                   | 96                                                    | 13                                                    | -                                                               | -                                             | 1                                                   | -                                                                   | 9                                                     | 48                      | 5                                                     |
| Österreich                            | 151 | -           | -                  | -                   | -                               | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                  | 1                          | -                           | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                                                     | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                       | -                                                     |
| Polen                                 | 152 | 2           | 2                  | -                   | 1                               | -                                                               | -                                             | -                                                   | -                                                                   | 1                                                     | -                                  | 2                          | -                           | -                                                               | -                                             | -                                                   | -                                                                   | 1                                                     | -                                                     | -                                                               | -                                             | -                                                   | -                                                                   | -                                                     | -                       | -                                                     |

tabula.technology is a free & open source tool for converting PDF tables to CSV

[illegible]

**Tabula**
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---

**Is the extracted data incorrect?**

You can revise your selected cells or try an alternate extraction method.

---

**Revise Selected Cells**

Data has been extracted from the cells you selected in the previous step. You can revise your selection(s) to add or remove cells.

← Revise selection(s)

HKL\_Kontinentkum.pdf
**Export Format:** CSV
 Export
 Copy to Clipboard

## Preview of Extracted Tabular Data

|                                       |    |                                                            |                                                                                                                                                                                                                                                                                                                                                               |                     |                                                       |
|---------------------------------------|----|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------|
| Aufschlüsselung nach Herkunftsländern | LS | ASYLANTRÄGE insgesamt<br>davon samst<br>Erst-Folge-anträge | ENTSCHEIDUNGEN über Asylanträge insgesamt<br>Anerken-Anerken-Ge-Fest-Ableh-sonstige samt<br>nennungennurwährungstellungnungenVerfahrensalsvoneines(unbegr.rensser- Asylbe-Flüchtlingsubsi-Abschie-abgel./ledigun-rechtigtegem.diärembungs-offens.gen (Art. 16a§ 3 ISchutzverbotesunbegr. undAsylGgem.gem.abgel.) Familien-§ 4 I§ 60 V/VII Asyl)Asyl/GAufenthG | ANHÄNGIGE VERFAHREN | ENTSCHEID über Erstant                                |
|                                       |    |                                                            | davon Erst- anträge                                                                                                                                                                                                                                                                                                                                           | davon Folge-anträge | Anerken- nui als Asylbe- r (Art. 16a unc Familien- As |

**Choose Alternate Extraction Method**

The current preview uses the **Stream** extraction method. If the data is not mapped to the correct cells, try the **Lattice** method instead.

Stream

Lattice

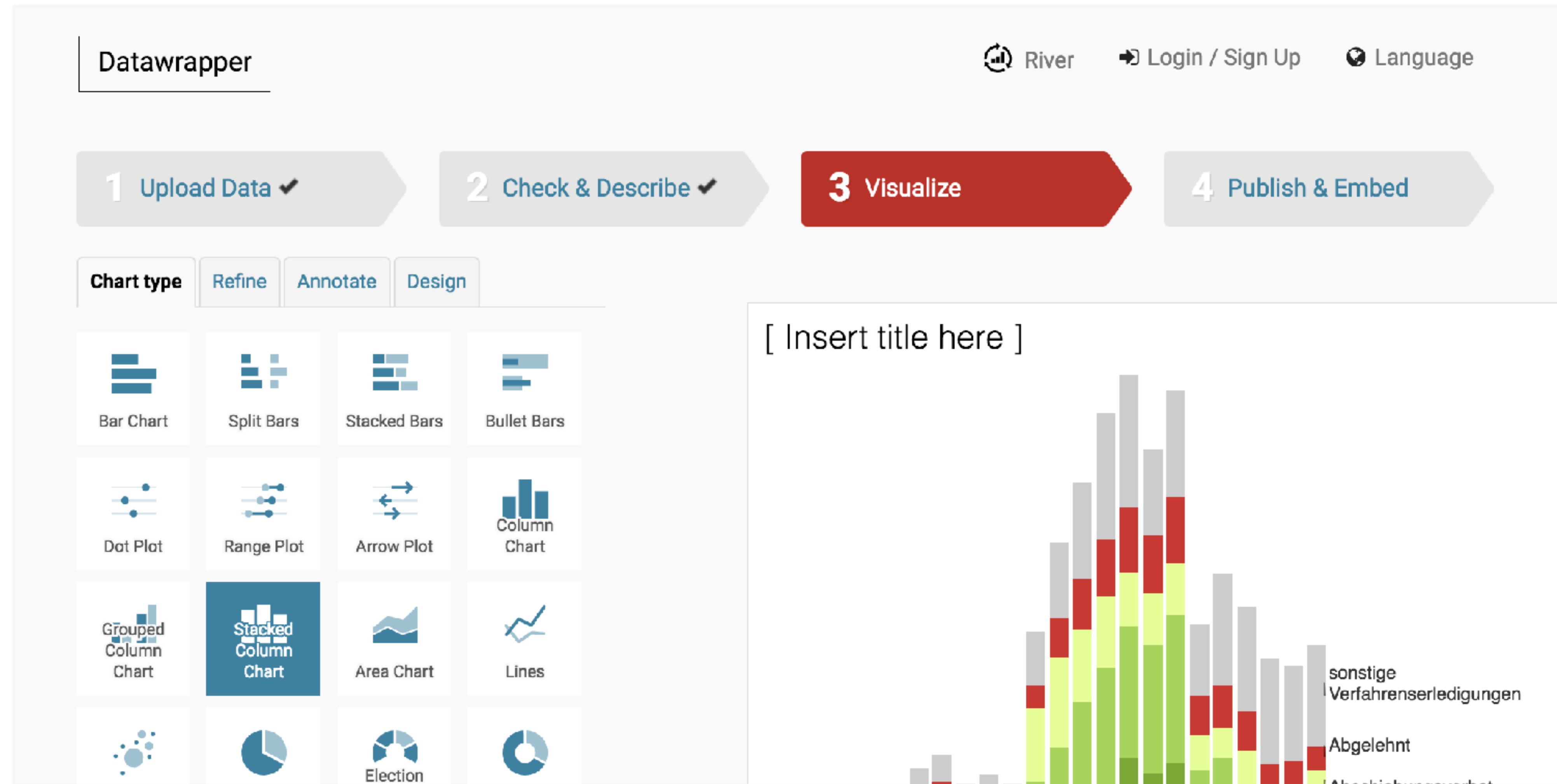
Stream looks for *whitespace* between columns, while Lattice looks for *boundary lines* between columns.

**Still look wrong?**

[Contact the developers](#) and tell us what you tried to do that didn't work.

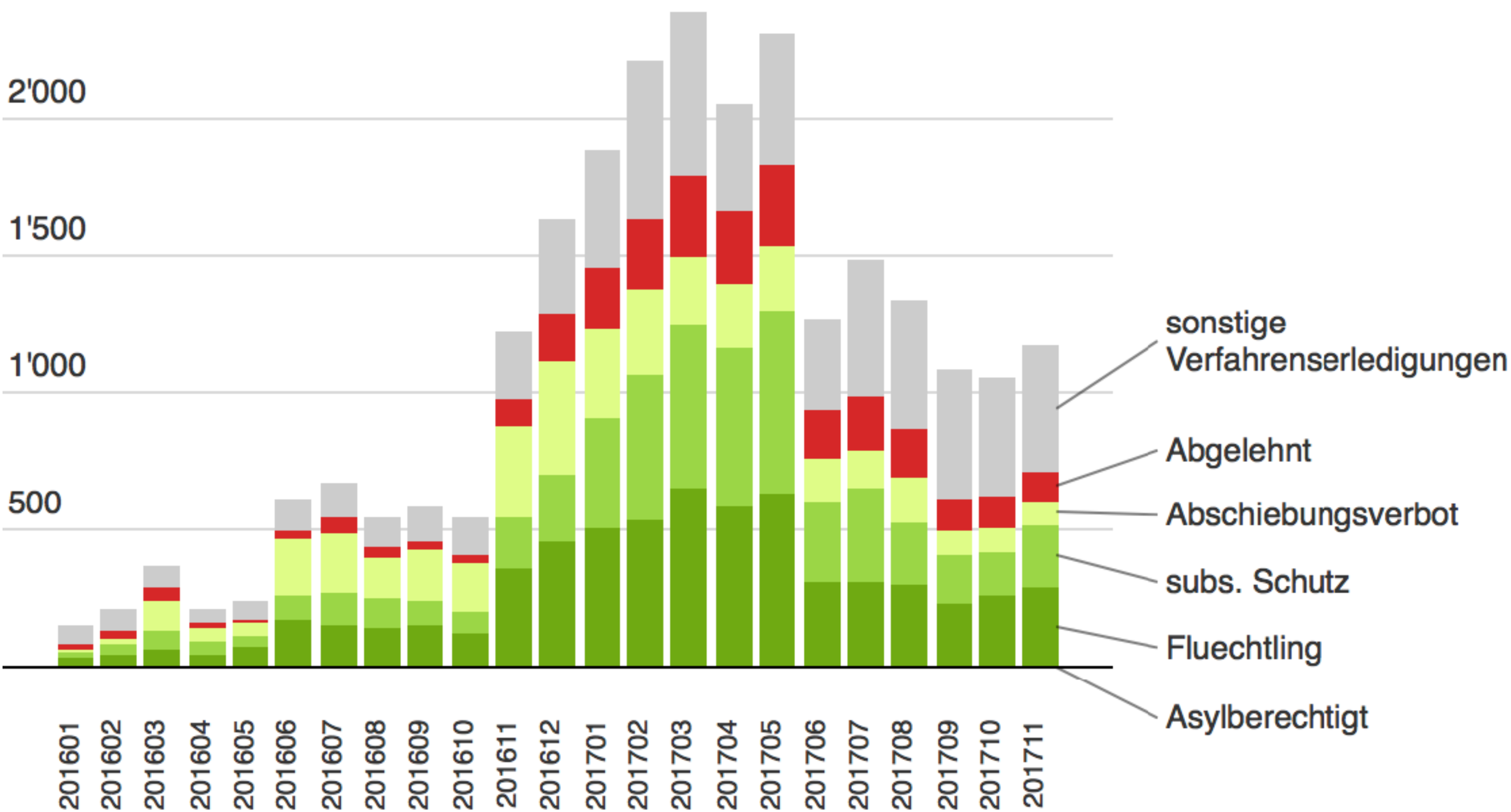
# Create visualization

Datawrapper is a tool from the data journalism community to create chars easily





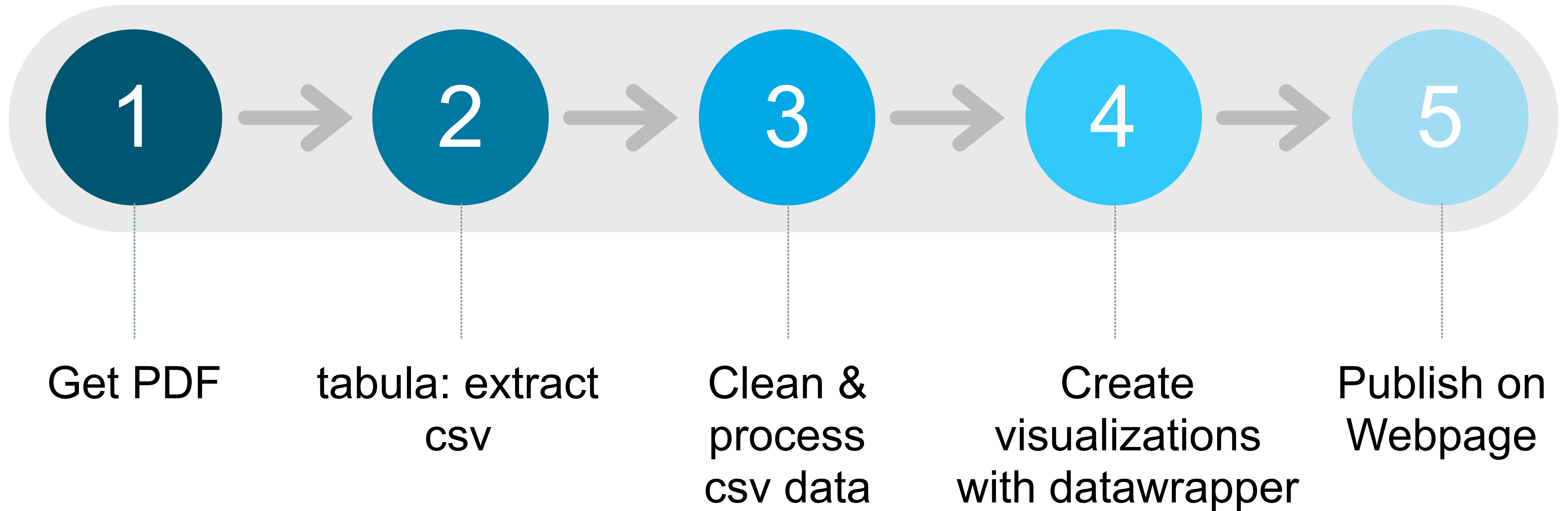
Somalia 2016 - November 2017



Source: BAMF

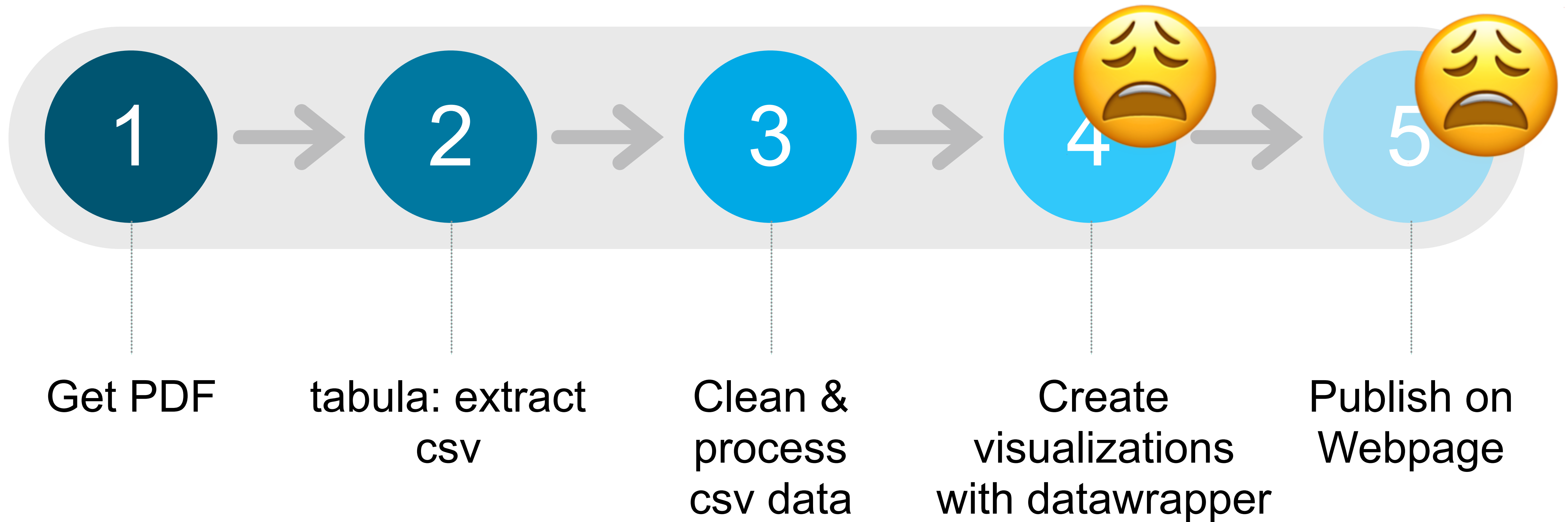
# Pipeline A: PDF to datawrapper

This works.



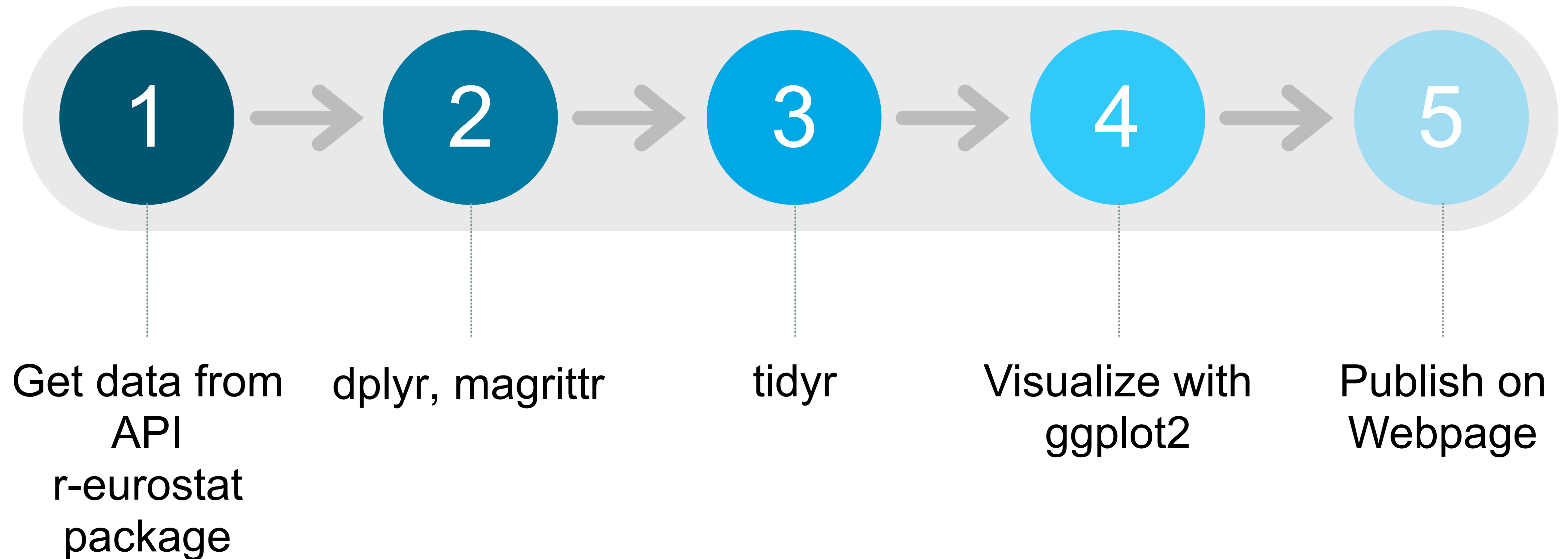
# Pipeline A: PDF to datawrapper

But Steps 4 and 5 are so much work!



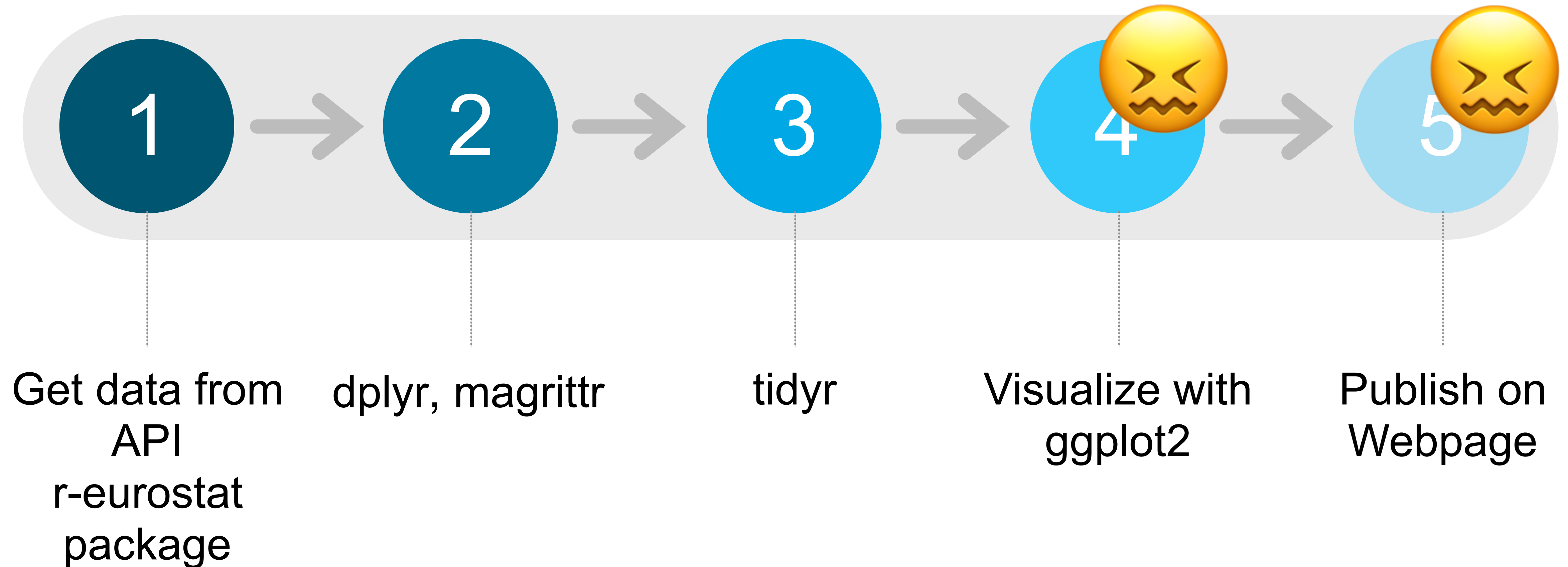
# Pipeline B: eurostat to R

R is magic.

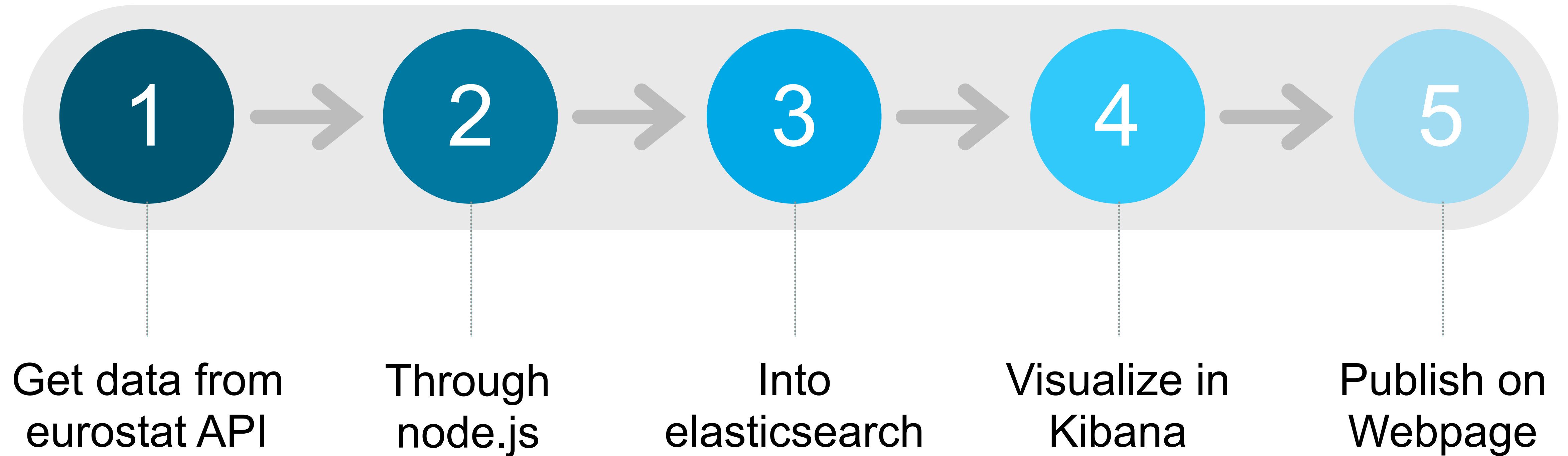


# Pipeline B: eurostat to R

But we aren't magicians (yet)...

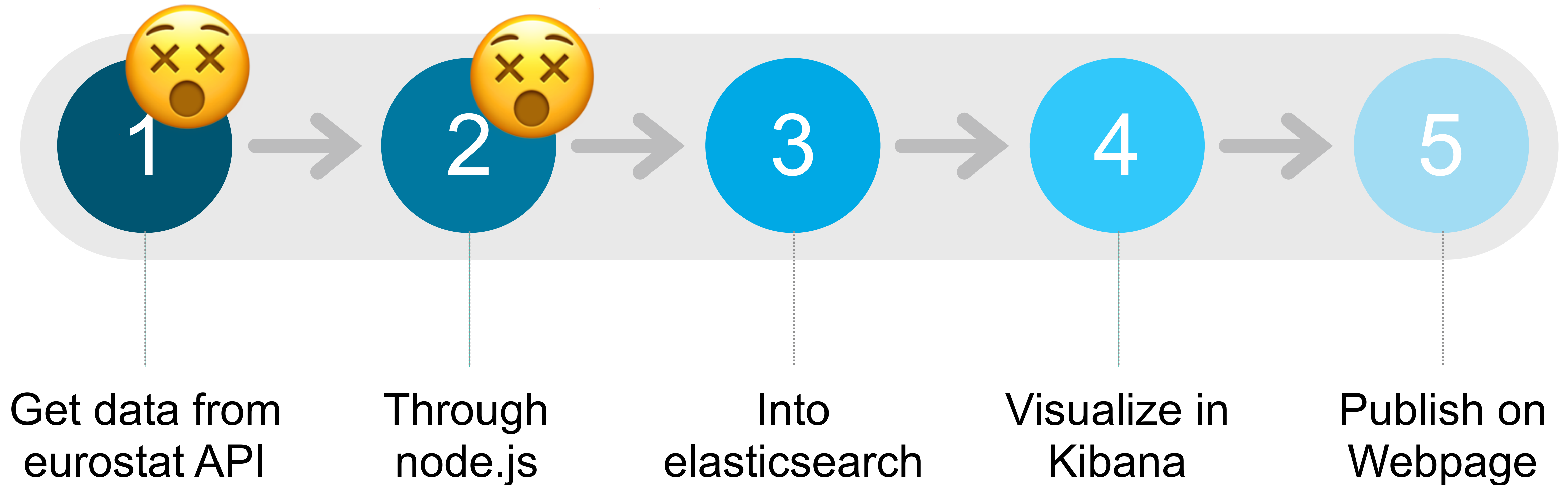


# Pipeline C: eurostat to Elastic Stack



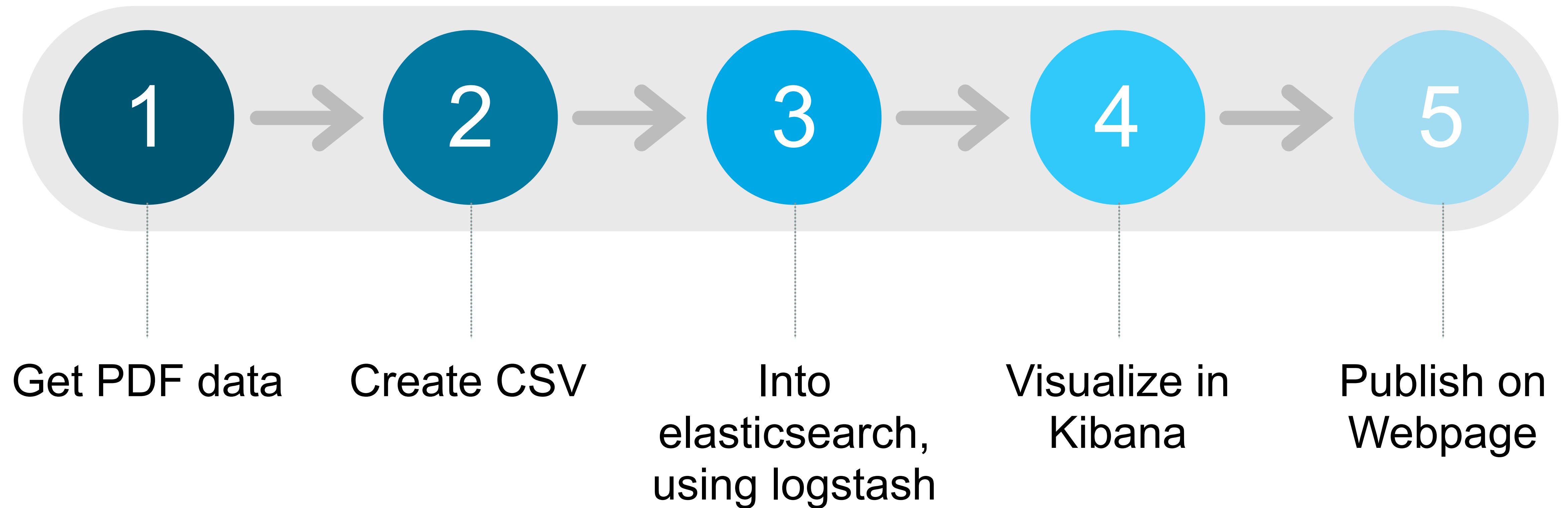
# Pipeline C: eurostat to Elastic Stack

This time getting / pushing data is error prone, which leads to data errors



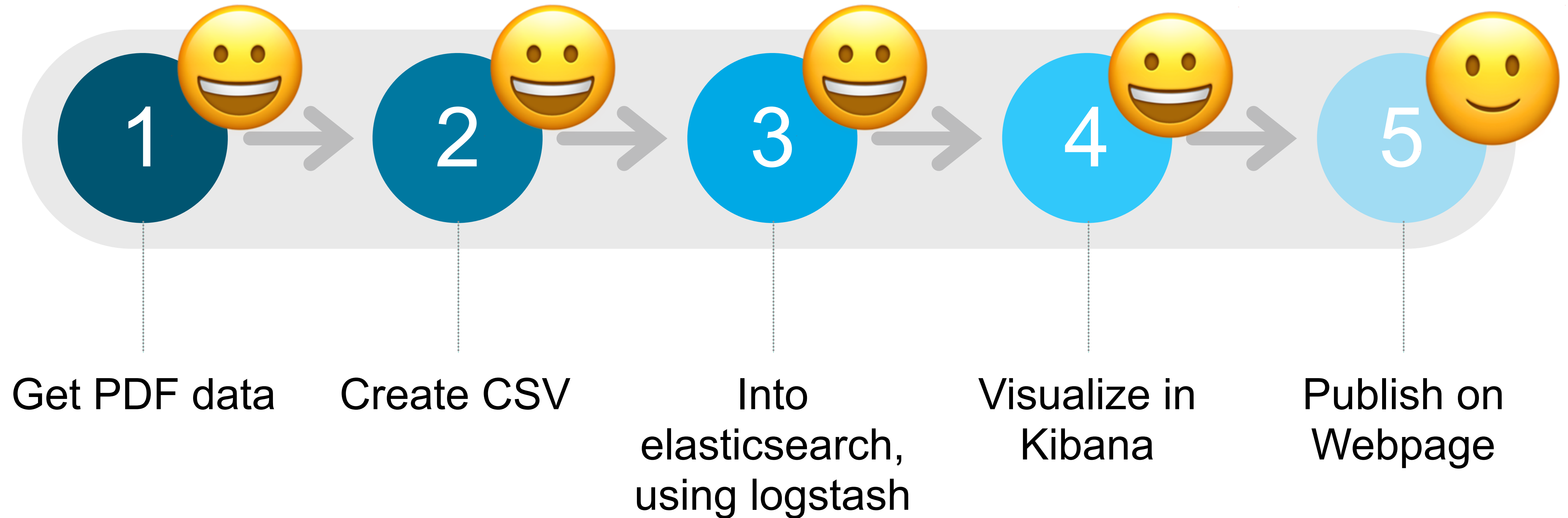
# Pipeline D: CSV to Elastic Stack

Let's combine the parts that work.



# Pipeline D: CSV to Elastic Stack

Let's combine the parts that work.



# Wishlist

- Embedding Kibana dashboards and graphics is not where we'd like it to be
- If you want to make it more accessible for data journalism, we have some ideas

# Why the Elastic Stack



- Because it's a stack!
- Because Kibana gives power to the user
- Because it's free software
- If you need your data protected, you can get this, too



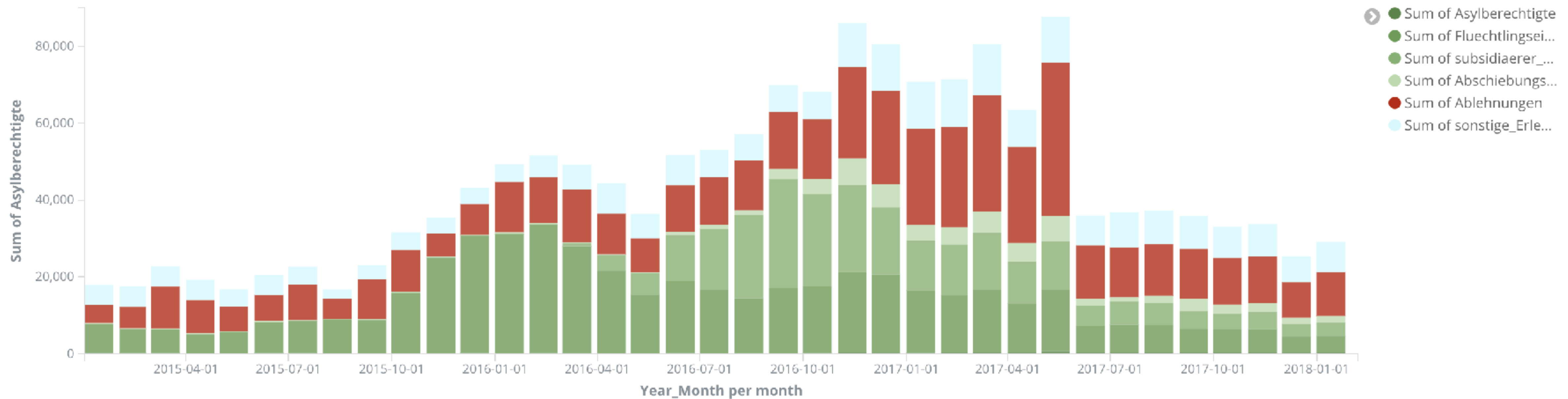
Search... (e.g. status:200 AND extension:PHP)

Uses lucene query syntax



Add a filter +

## BAMF Entscheidungen, monatlich



## BAMF, Liste der Herkunftsländer (sortiert nach Summe der Entscheidungen)

Herkunftsland.keyword: Descending ▾ Sum of Entscheidungen ▾

Syrien, Arabische Republik 507,045

Afghanistan 194,584

Irak 160,771

Albanien 83,882

Eritrea 56,356

Serbien 55,095

## BAMF, Liste der Herkunftsländer (alphabetisch)

Herkunftsland.keyword: Descending ^ Sum of Entscheidungen ▾

Afghanistan 194,584

Albanien 83,882

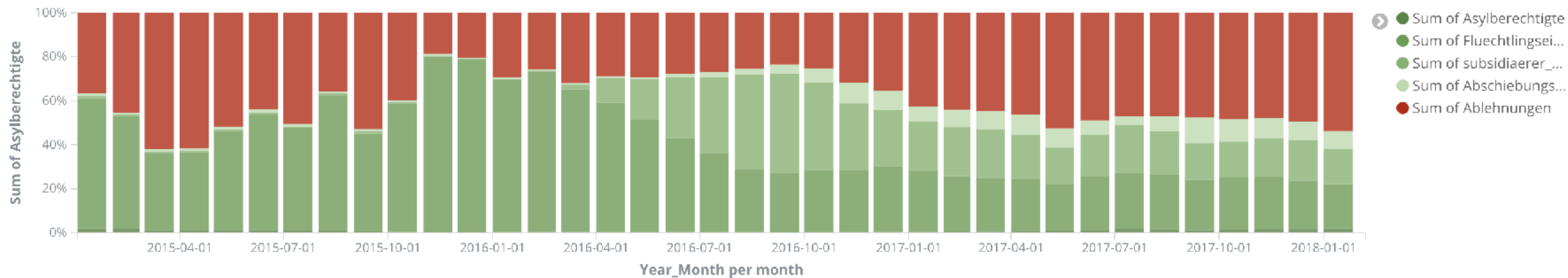
Algerien 10,632

Andorra 0

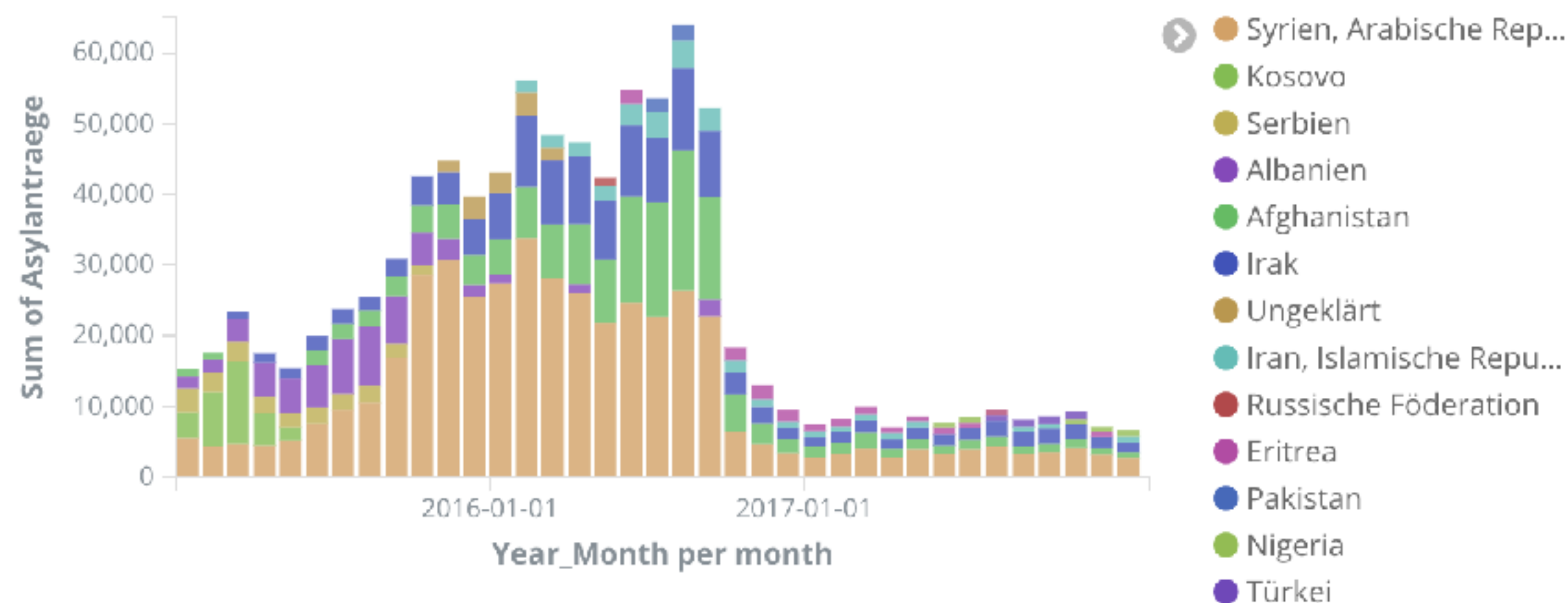
Angola 634

Argentinien 6

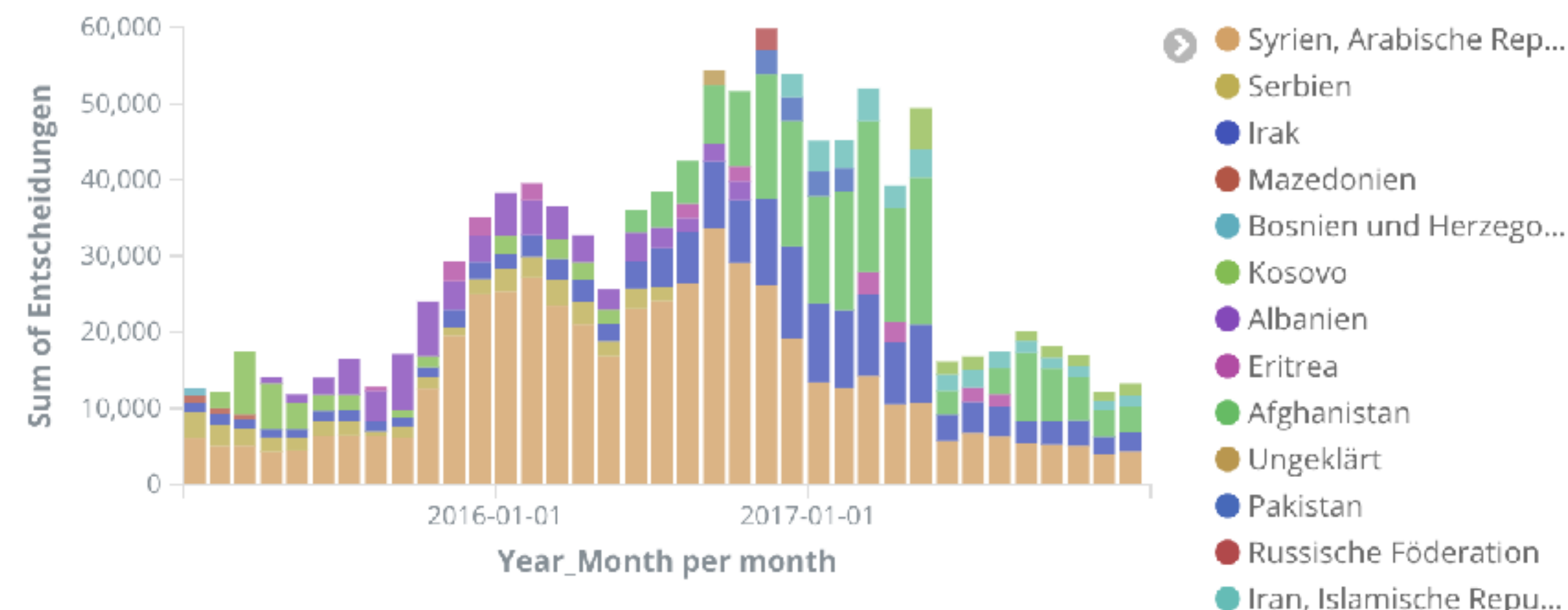
BAMF Entscheidungen monatlich, in Prozent (ohne sonstige Erledigungen)



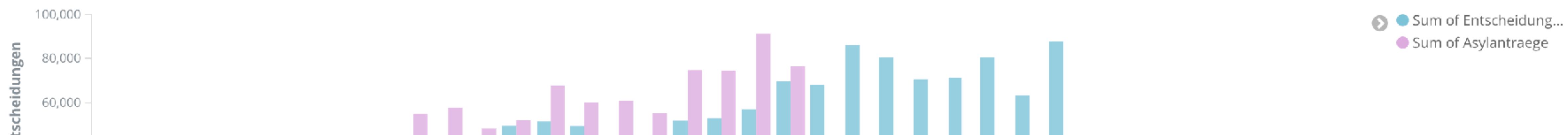
BAMF Anträge, zahlenstärkste Herkunftsländer



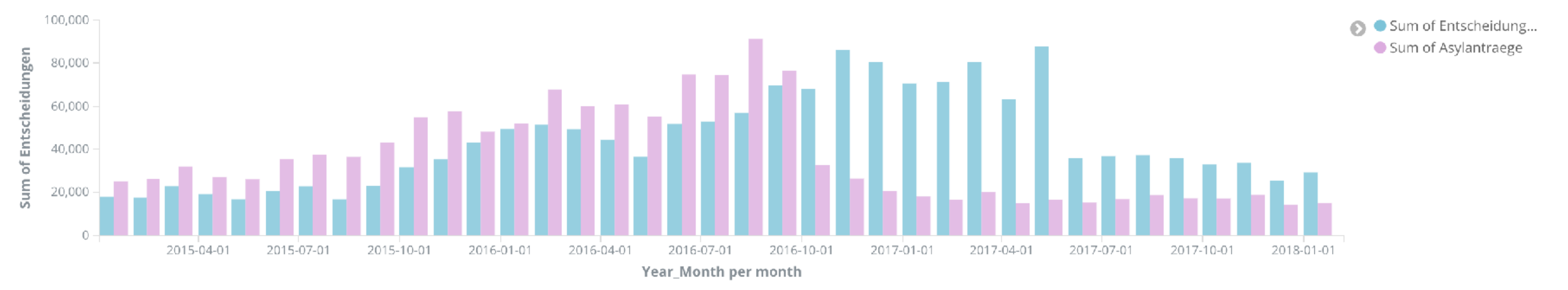
BAMF Entscheidungen, zahlenstärkste Herkunftsländer



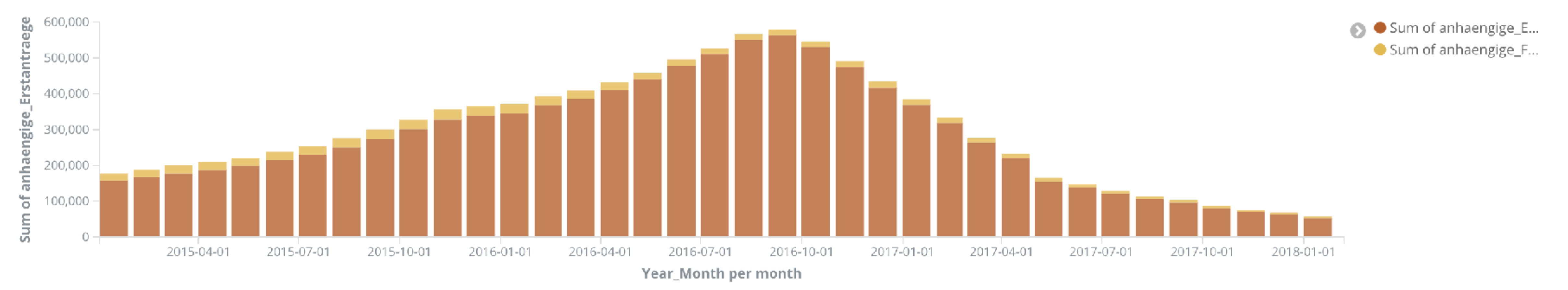
BAMF, Entscheidungen versus Anträge



BAMF, Entscheidungen versus Anträge



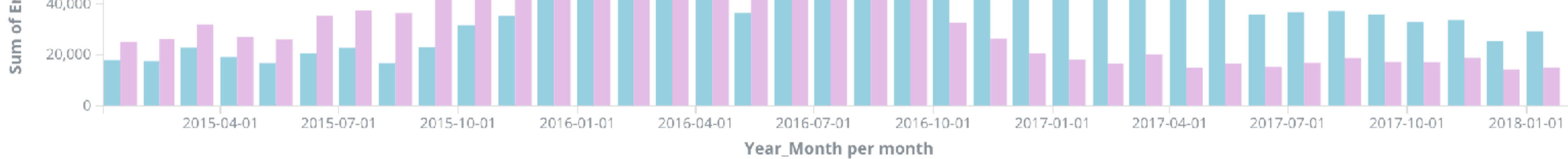
BAMF anhängige Anträge



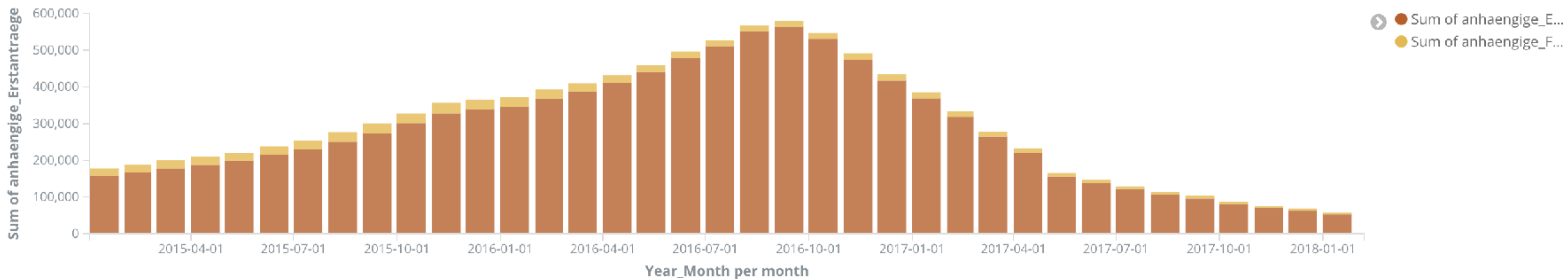
BAMF Entscheidungen Tabelle

1-50 of 5,524 < >

| Time                              | Herkunftsland              | Entscheidungen | Asylberechtigte | Fluechtlingseigenschaft ▾ | subsidiärer_Schutz | Abschiebungsverbot | Ablehnungen | sonst_Erled |
|-----------------------------------|----------------------------|----------------|-----------------|---------------------------|--------------------|--------------------|-------------|-------------|
| ▶ February 1st 2016, 01:00:00 000 | Syrien, Arabische Republik | 27,129         | 87              | 26,628                    | 21                 | 47                 | 13          | 316         |

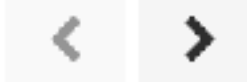


### BAMF anhängige Anträge



### BAMF Entscheidungen Tabelle

1-50 of 5,524



| Time                              | Herkunftsland              | Entscheidungen | Asylberechtigte | Fluechtlingseigenschaft ▾ | subsidiärer_Schutz | Abschiebungsverbot | Ablehnungen | sonst_Erled |
|-----------------------------------|----------------------------|----------------|-----------------|---------------------------|--------------------|--------------------|-------------|-------------|
| ▶ February 1st 2016, 01:00:00.000 | Syrien, Arabische Republik | 27,129         | 87              | 26,628                    | 21                 | 47                 | 13          | 316         |
| ▶ January 1st 2016, 01:00:00.000  | Syrien, Arabische Republik | 25,265         | 83              | 24,889                    | 18                 | 48                 | 2           | 211         |
| ▶ December 1st 2015, 01:00:00.000 | Syrien, Arabische Republik | 25,015         | 72              | 24,781                    | 2                  | 19                 | 9           | 126         |

# What is the Impact?

There's a light in the darkness ...

# Before, there was Darkness

- There were only rumors:

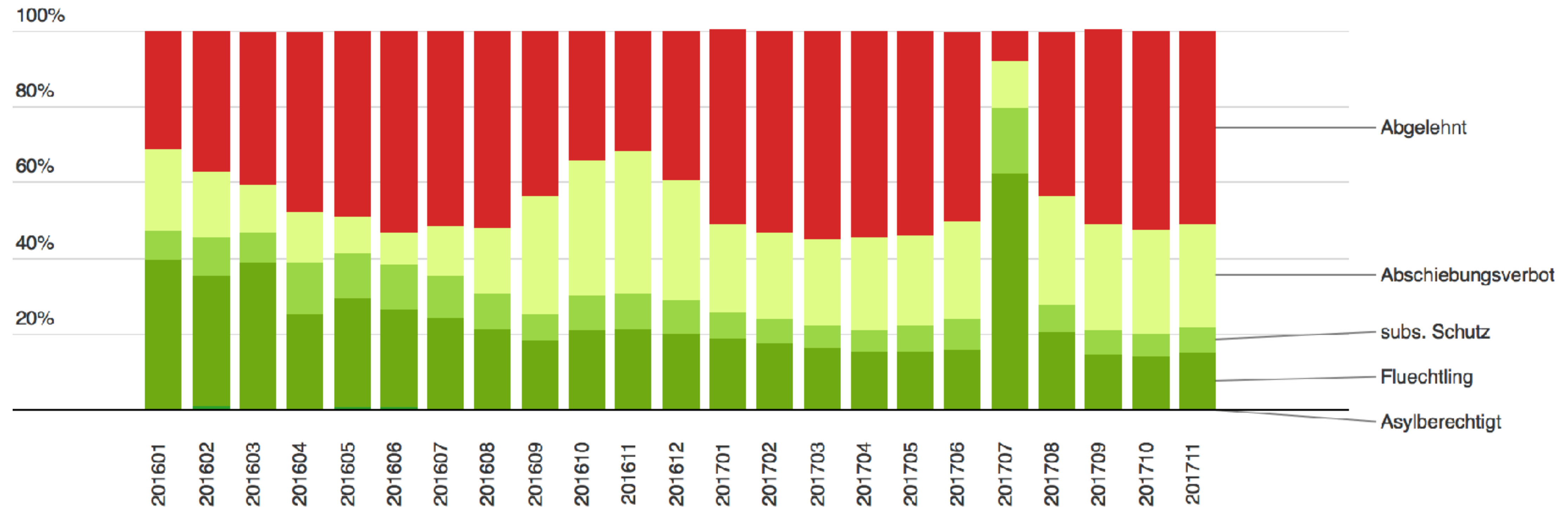
*„I have the impression that there very few of decisions on Afghanistan lately“*

# A look at: Afghanistan

Activists always want to see the quota of positive decisions.

For Afghanistan:

Afghanistan 2016 - November 2017 Prozent

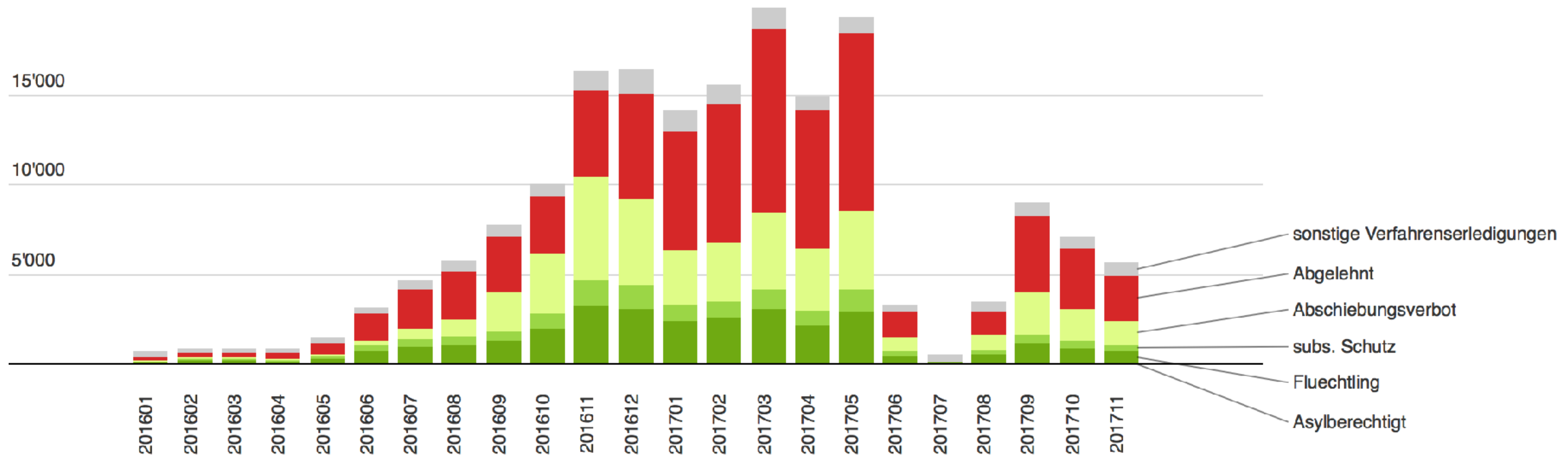


Source: BAMF

# A look at: Afghanistan

Look at the absolute numbers. What happened in early summer 2017?

Afghanistan 2016 - November 2017



Source: BAMF

# A Bomb Happened

Kabul, end of May 2017

- A terrorist attack killed nearly 100 people, injuring hundreds, damaging the German embassy
- For some time, the ministry wasn't sure how to decide on asylum requests from Afghanistan



# Plans for the Datathon

- Cooperate with more local organizations
- Make Kibana more accessible
- Eurostat data
- Connect Europe wide with activists
- Create R pipeline
- More datathons

# The Refugee Situation and the IT Community

# The Refugee Situation

One of the great challenges of our time

- 65 Million displaced persons  
— a lot, but not impossible to take care in a dignified way
- Most of us live in democracies, which is good
- Those democracies are organized along national borders,  
which is bad for everyone with a passport of a failed state, or that hates you
- Refugees have no voice

# The IT community

## Natural Allies

- International
- Progressive
- Optimistic, with an abundance mindset
- Agile
- We have a voice

# We are Spoiled

Be humble, bring patience.

- We expect great impact with minimal effort
- We are used to getting free pizza
- We want to scale
- We are impatient

# Why We Keep Going

After more than 2 years

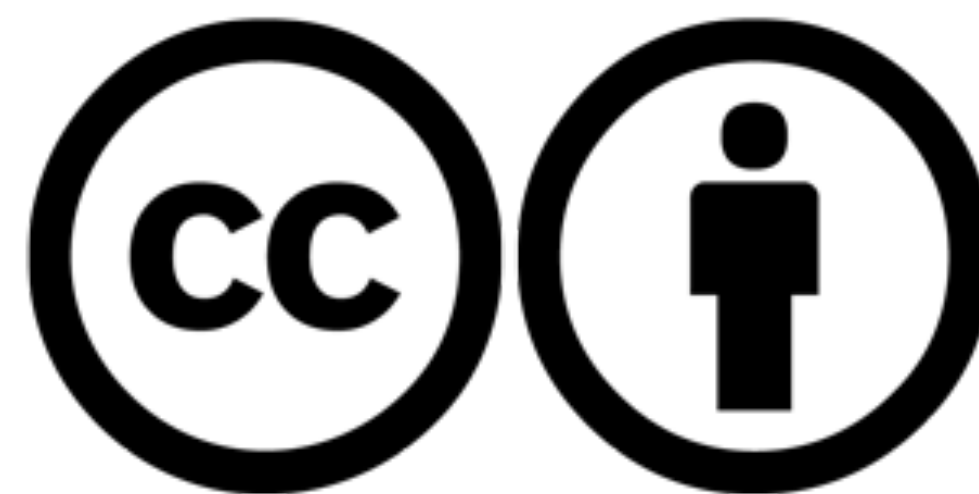
- This is not about helping others, this is about our dignity
- Using our democratic power
- We give technology, we get relevance
- And there are all those wonderful people

GET INFORMED

GET INVOLVED

BE RELEVANT

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