



Data collection for complex phenomena

0

Introduction



Gnucoop

“ Using free software
and sustainable
technological
solutions to change
the world ”
Gnucoop team



Founded in 2012 to
support

- no profits
- ONG
- International Orgs





IRHIS UNHCR



2016 – 2019

Development of a
platform WEB + APP
Mobile

Health data collected
in refugee camps by
UNHCR.





DINO

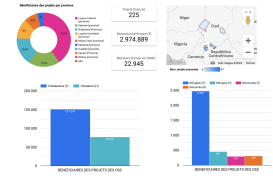


A data management platform:

- Offline first
- Forms and reports creation
- Mobile and web
- +30 deployments

<https://dinoapp.io>

DINO deployments



- **M&E** in 6 countries (Ciad, Burkina Faso, Niger, Senegal, Mali, Mauritania). Public website
- Eye **health visits** in Uganda
- AI **School attendance** (Burkina Faso)
- **Work placement** for vulnerable groups in Morocco, Italy, El Salvador, Côte d'Ivoire

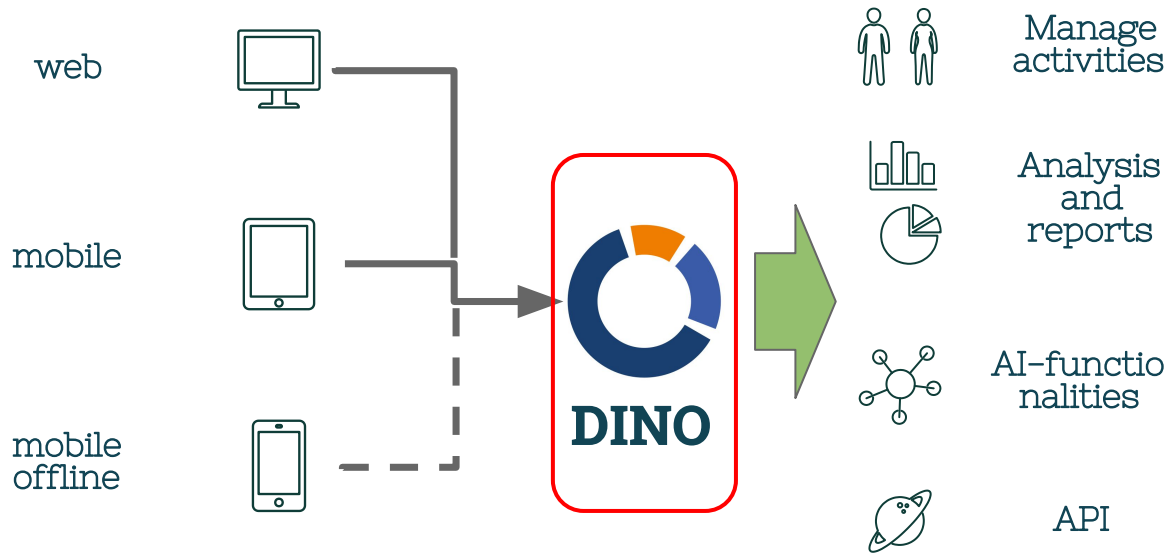
1

Collecting data with CTM

The challenge

- CTM has been collecting data since 2013
- 2 different systems
- Wishlist:
 - **Adapt** DB schemas to evolving needs
 - Merging of **historical** data
 - **Exchange** data with partners and institutions
 - Integrate **emerging technologies**

The proposed solution





ITA ▾

Admin Dino



Dashboard

Form

Report

Aggregazione


Metriche

Utenti

Traduzioni

Form





Filtra



01 Anagrafica



02 Regolamento



03 Servizi



04 Aggiornamenti progetto
individuale



Identification

A simple badge with a code that can be scanned



Chrome Archivio Modifica Visualizza Cronologie Preferiti Profili Scheda Finestra Guida

ctm-dev.vercel.app/forms/963f643f-ad55-4d85-a3d8-100b113f2e9a/ed1/9a18ae95-7986-48e1-aad0-71a138646160

BSA Dashboard Form Report Aggregazione Metriche

METRICHE DEL FORM 2 DATI DEL FORM

Date di creazione*
14/01/2025

Persona *

(senza nome marocco) - (551)
(senza nome romanìa) - (2)
AAMARA Rachid - (284)
AAQIL Mounir - (1180)
AAQUIL Elmeñdi - (1183)

Un Form "01 Anagrafica" con questo preciso set di Metriche esiste già. Per favore, seleziona Metriche diverse UN FORM UNICO ESISTE GIÀ



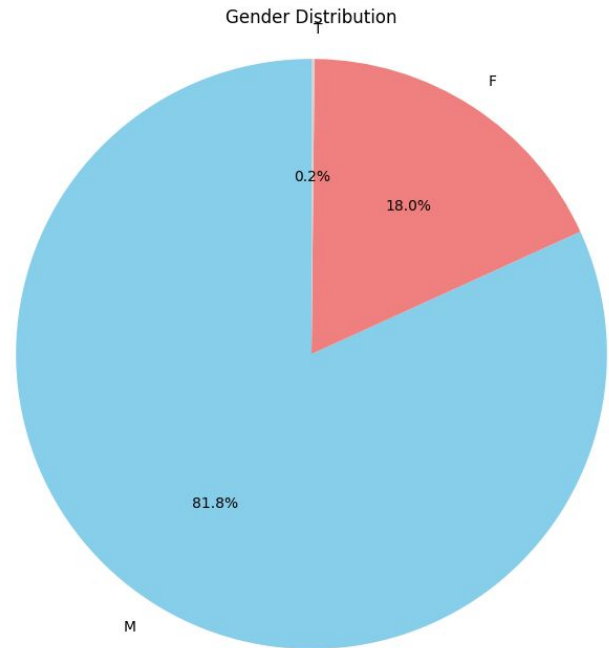
2

Data analysis

N. of people

Gender	N. of people
M	3548
F	782
T	7
N/A	70
TOTAL	4407

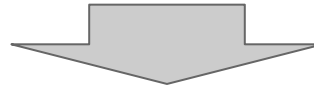
From May 5th, 2013 to
May 29th, 2025



Searching for duplicates

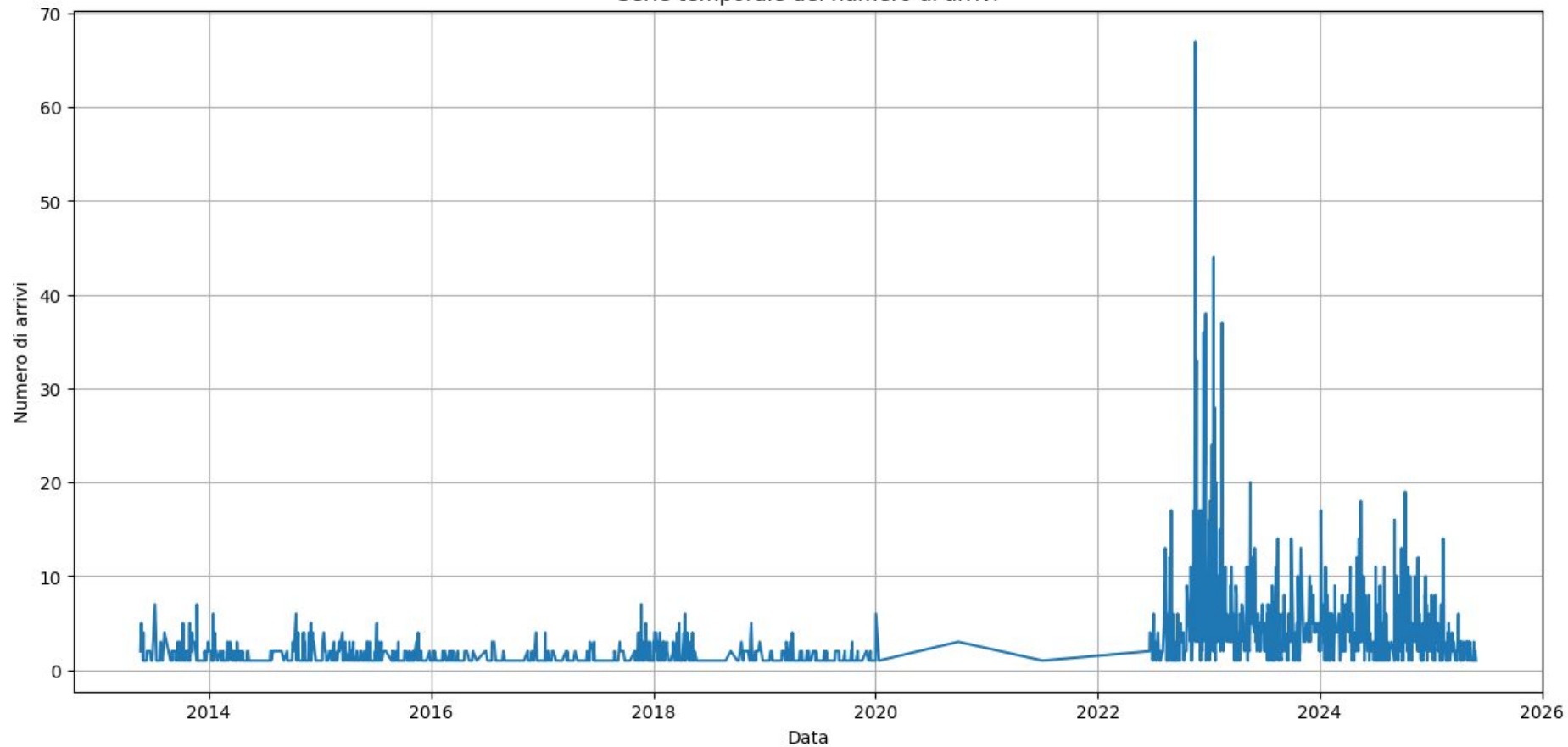
Levenshtein
distance

- The same person could have been registered more than once with (slightly) different names
- We look for “similar” names that could correspond to the same person

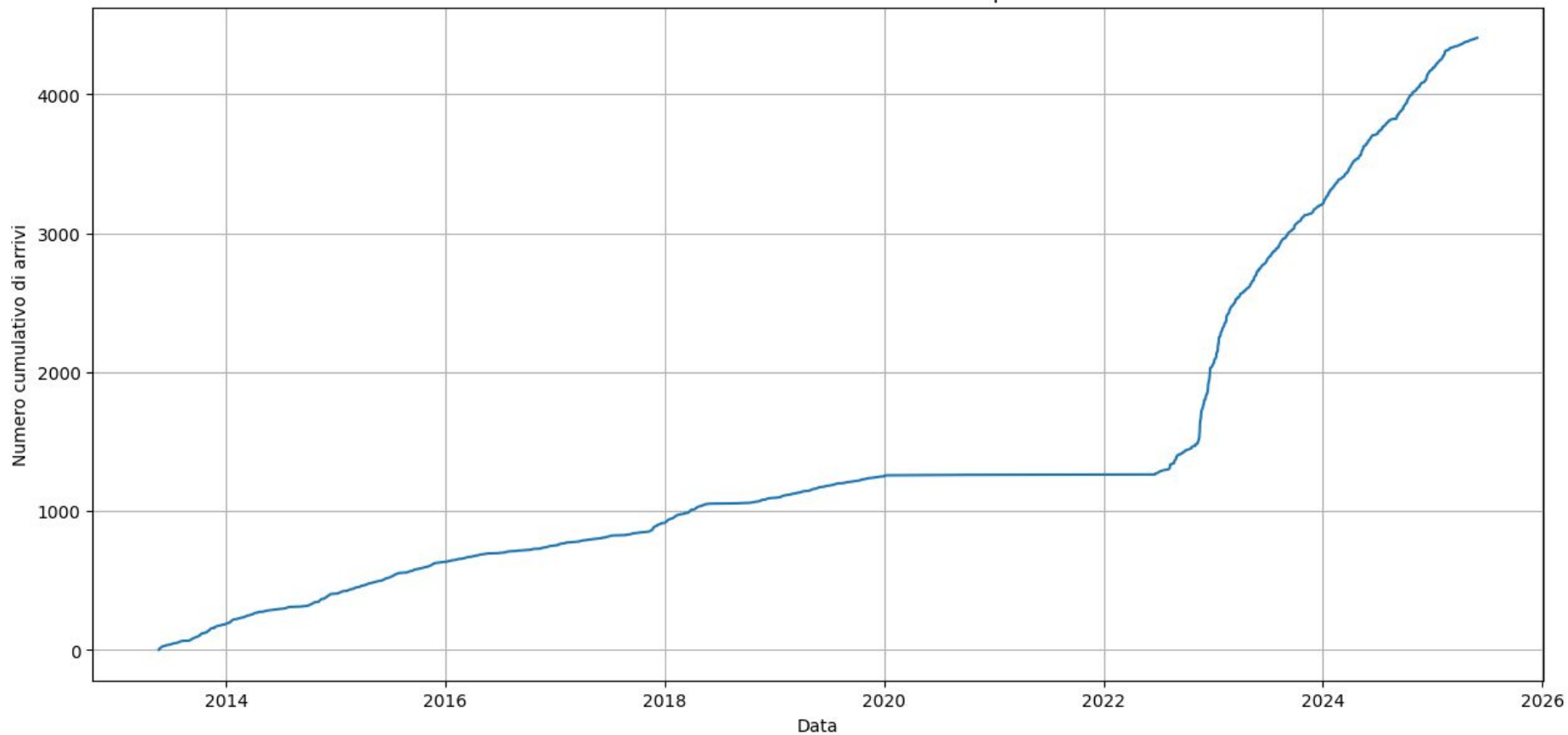


170 (4%) possible double counting

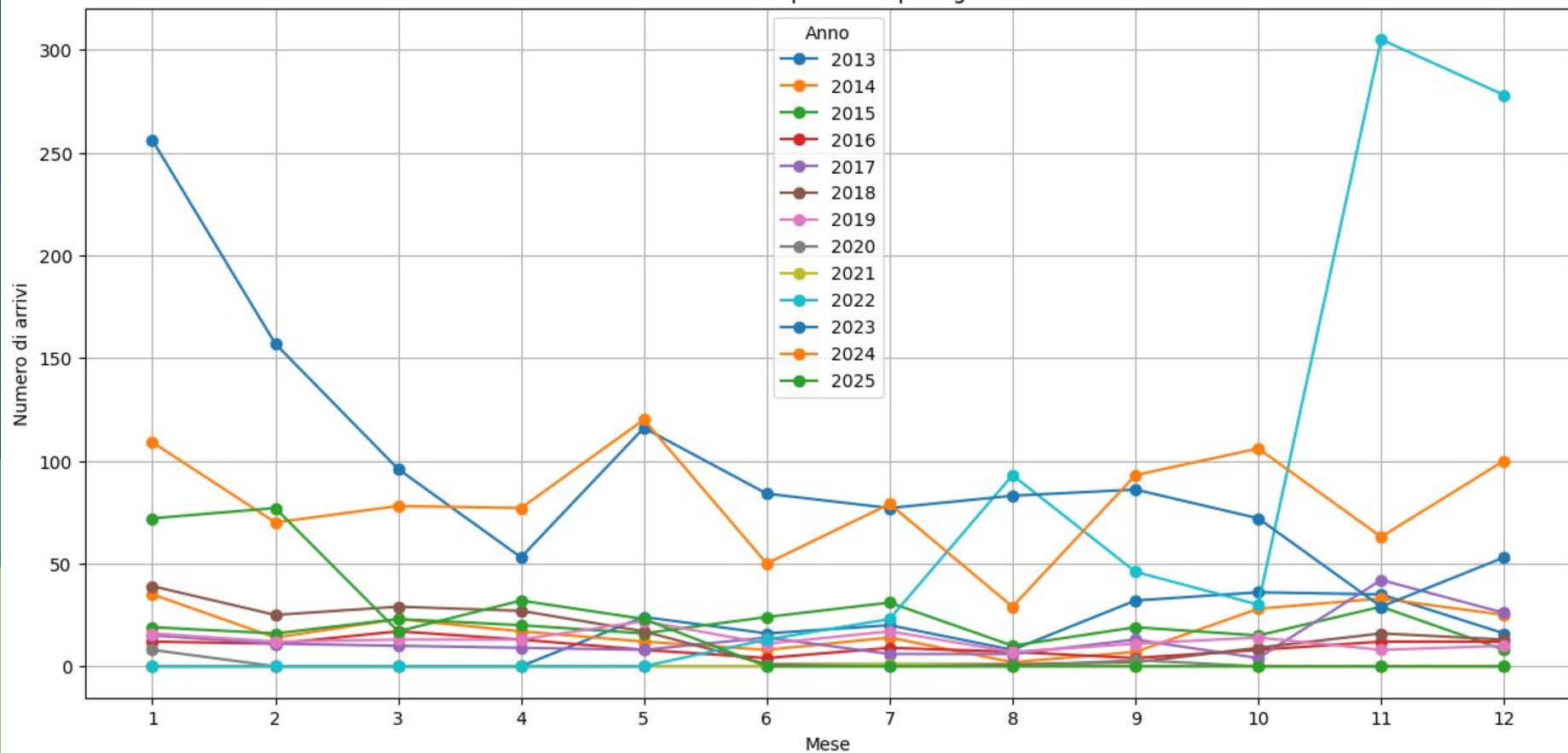
Serie temporale del numero di arrivi



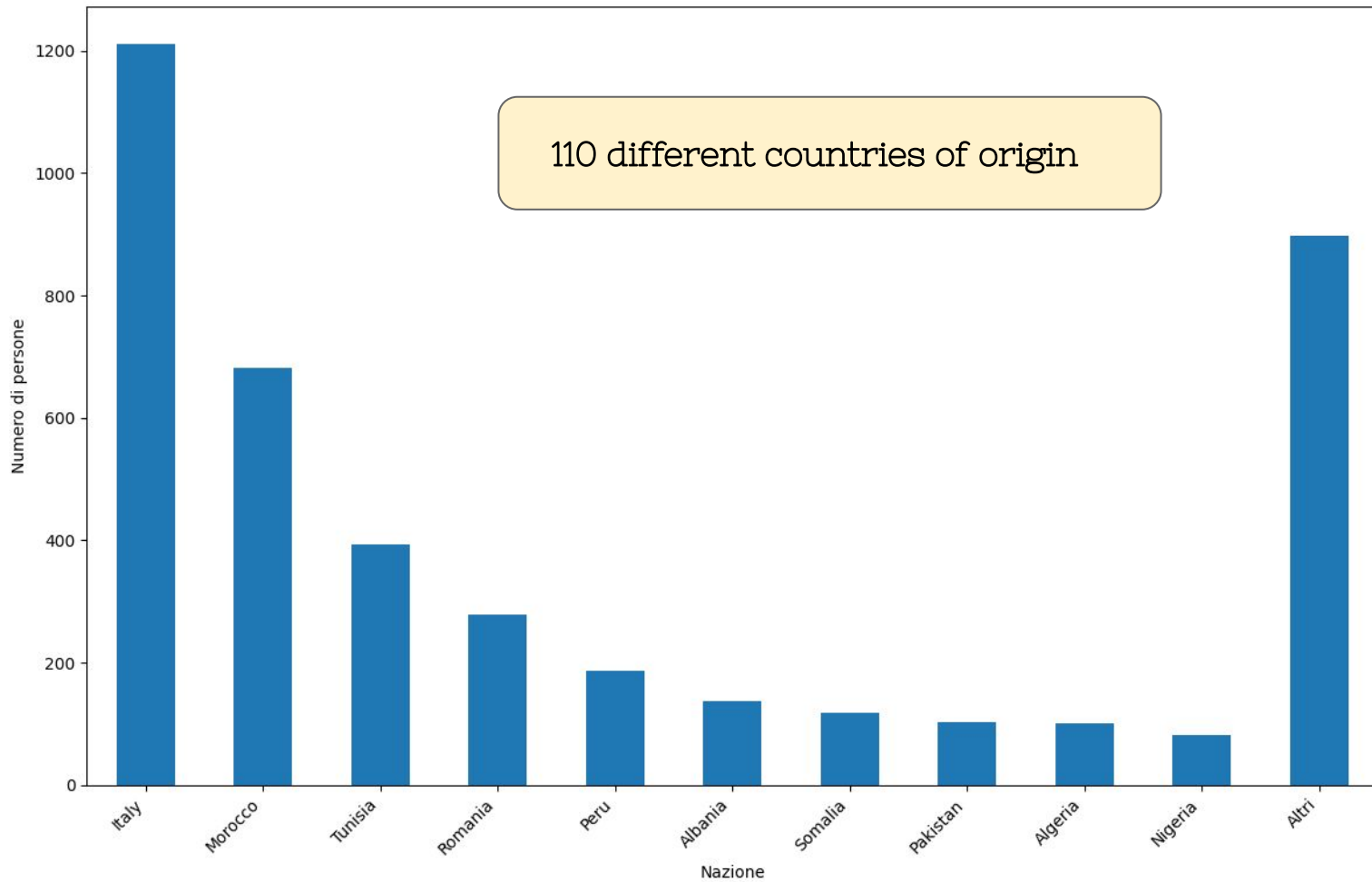
Numero cumulativo di arrivi nel tempo



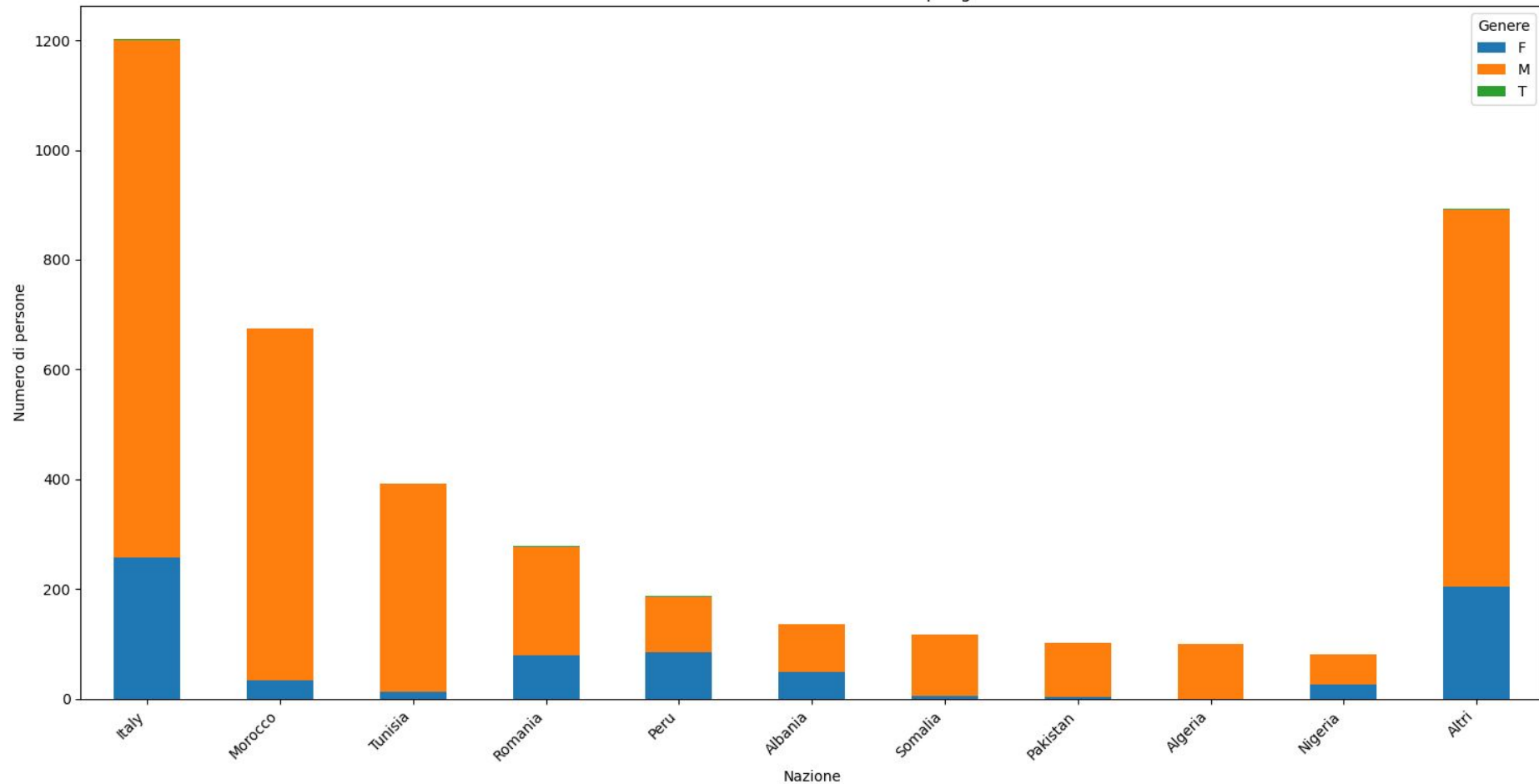
Numero di arrivi per mese per ogni anno



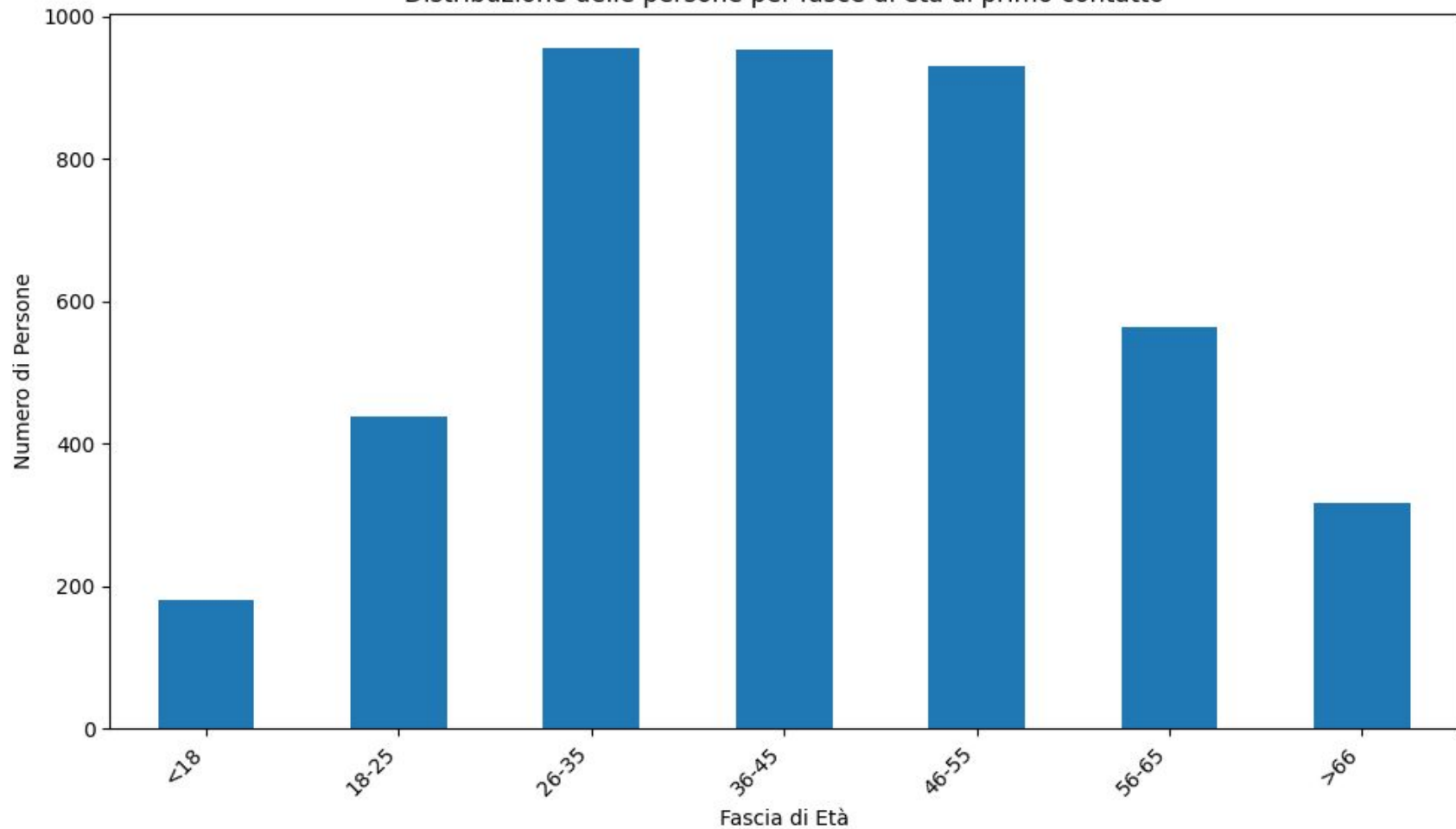
Nazioni di nascita



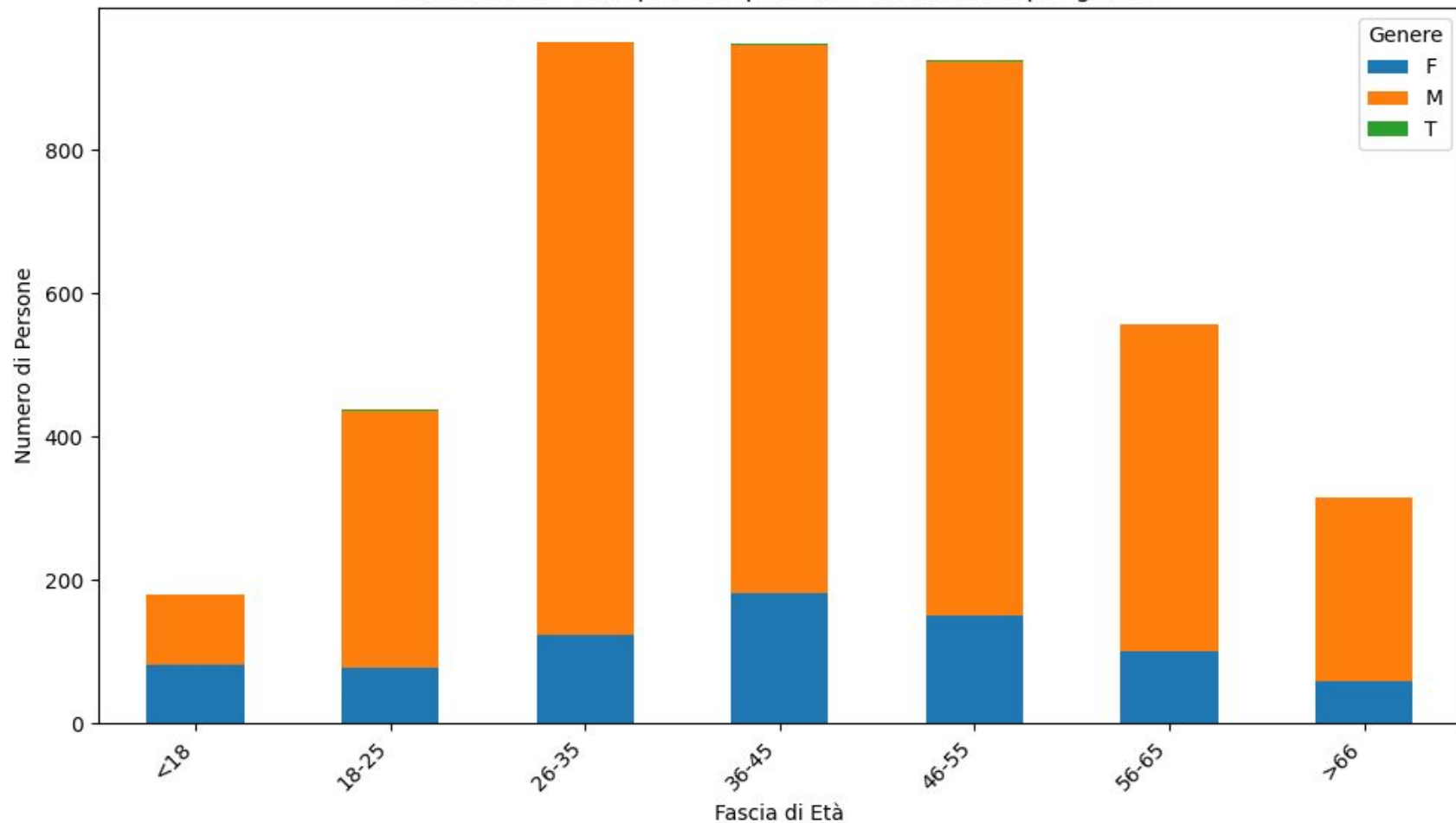
Distribuzione delle nazioni di nascita per genere



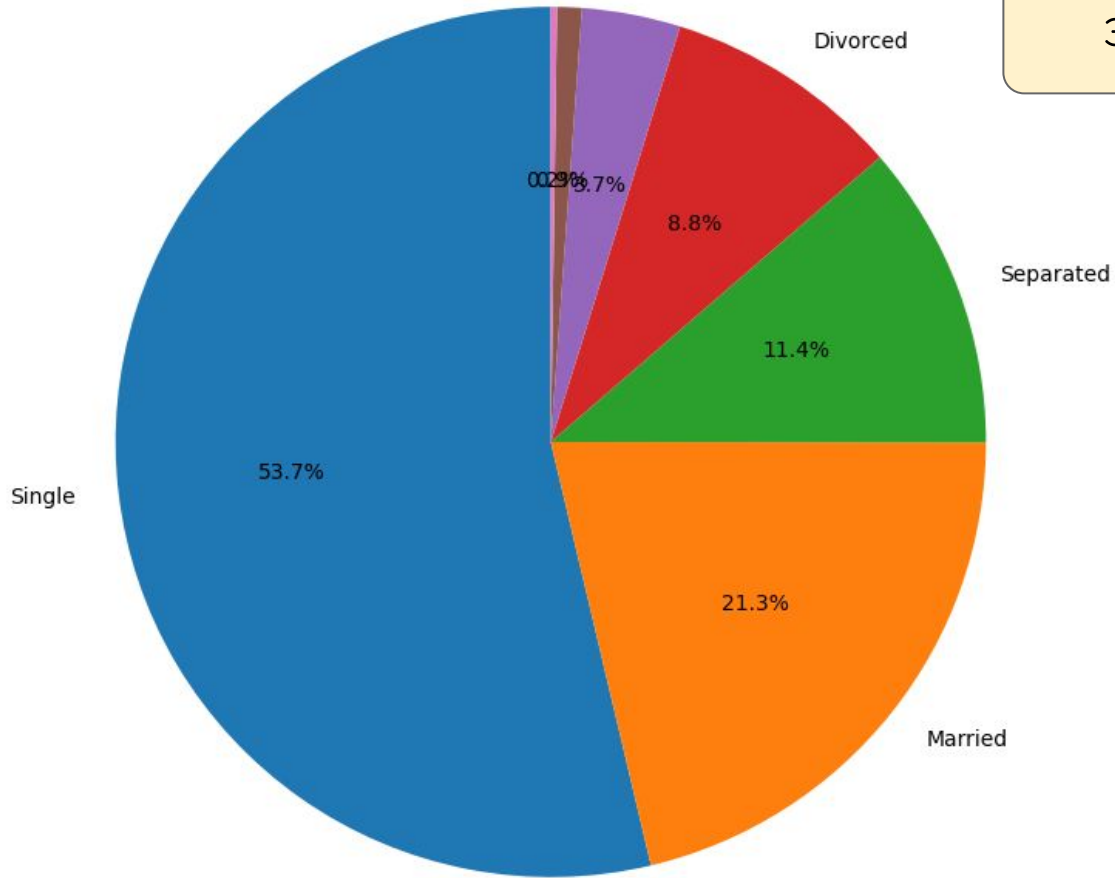
Distribuzione delle persone per fasce di età al primo contatto



Distribuzione delle persone per fasce di età divisa per genere

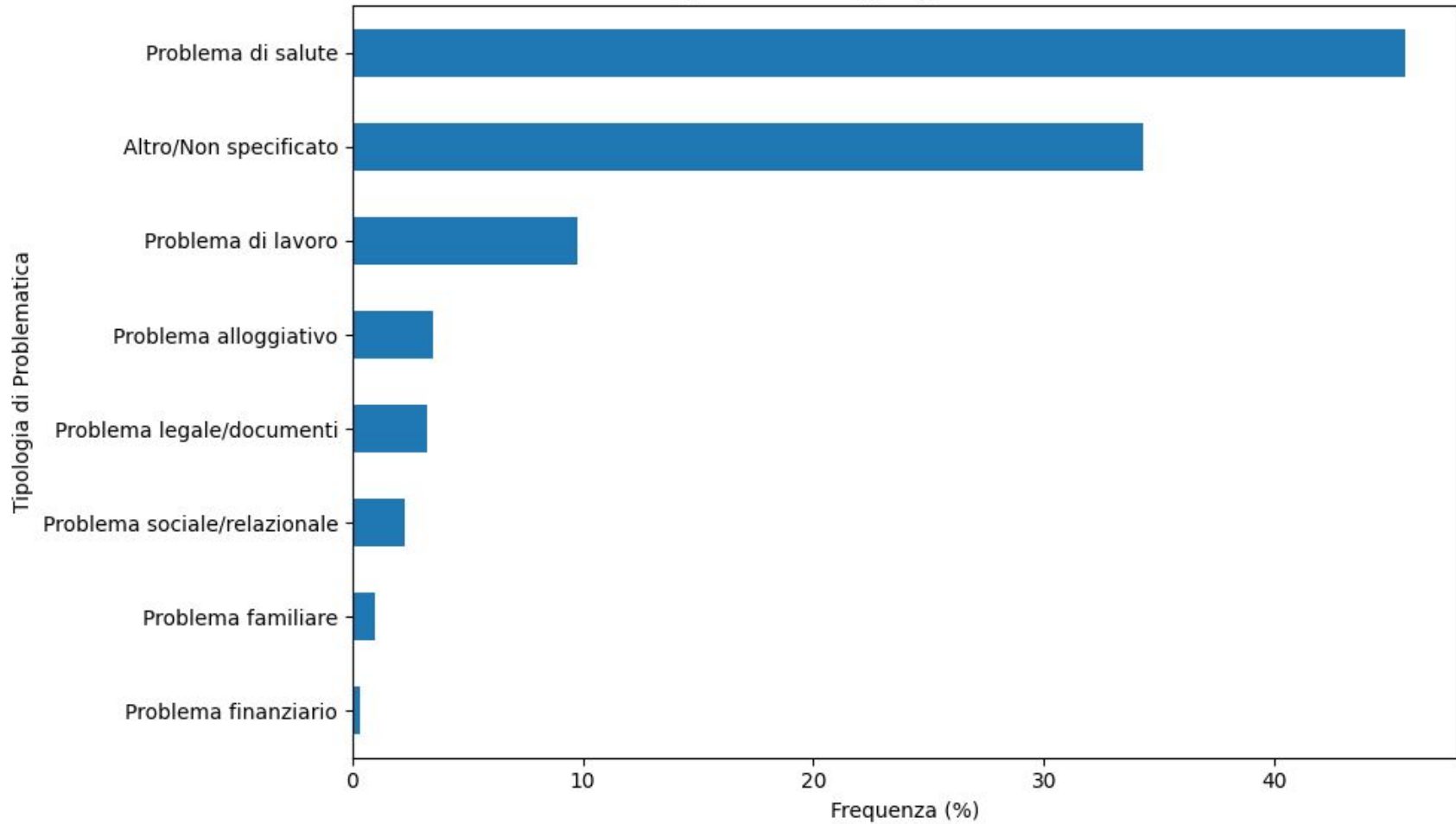


Marital Status Distribution
not in a relationship



3/4 are alone

Frequenza delle Tipologie di Problematiche



Access to services

Since 2022



54.072

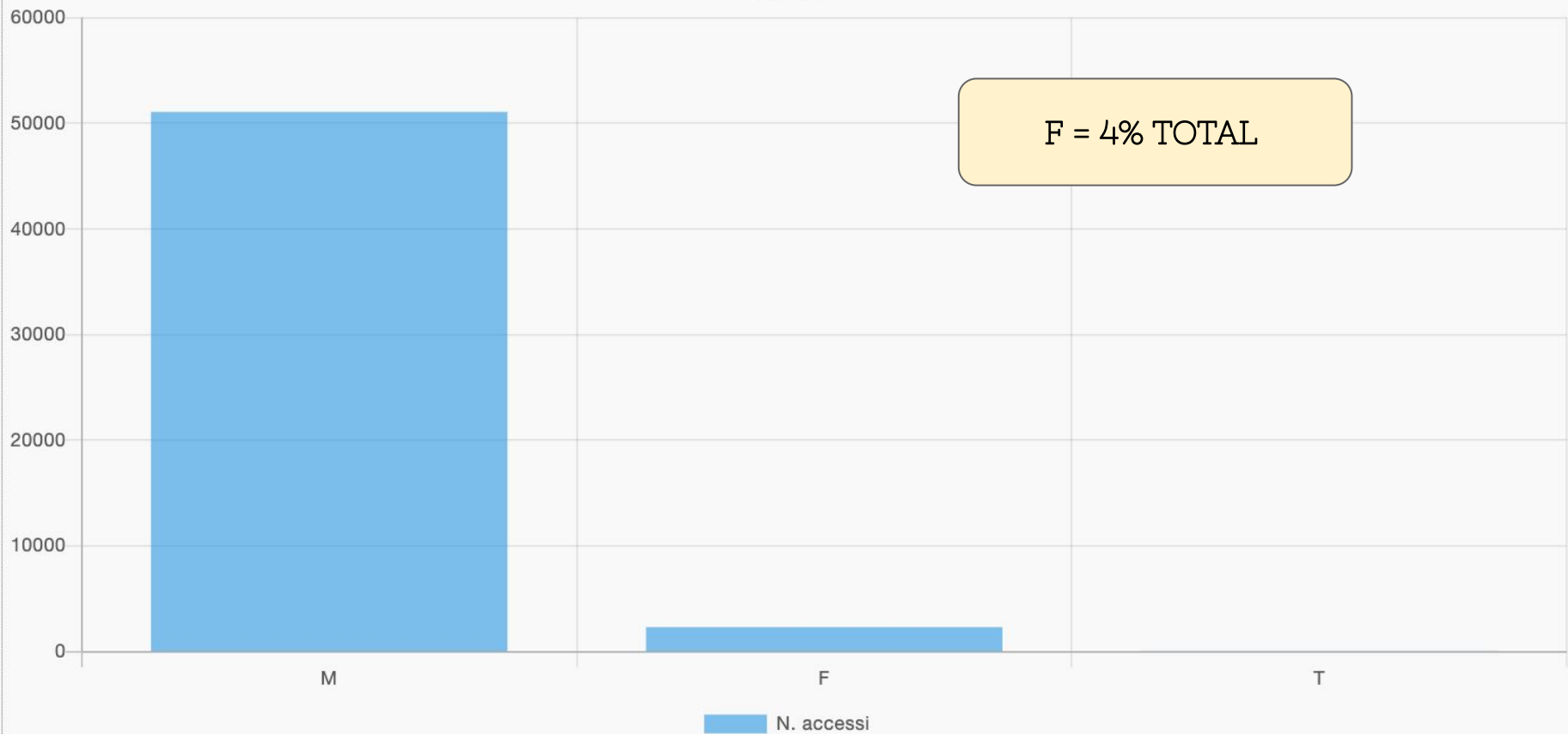
Total number of contacts (same person +)



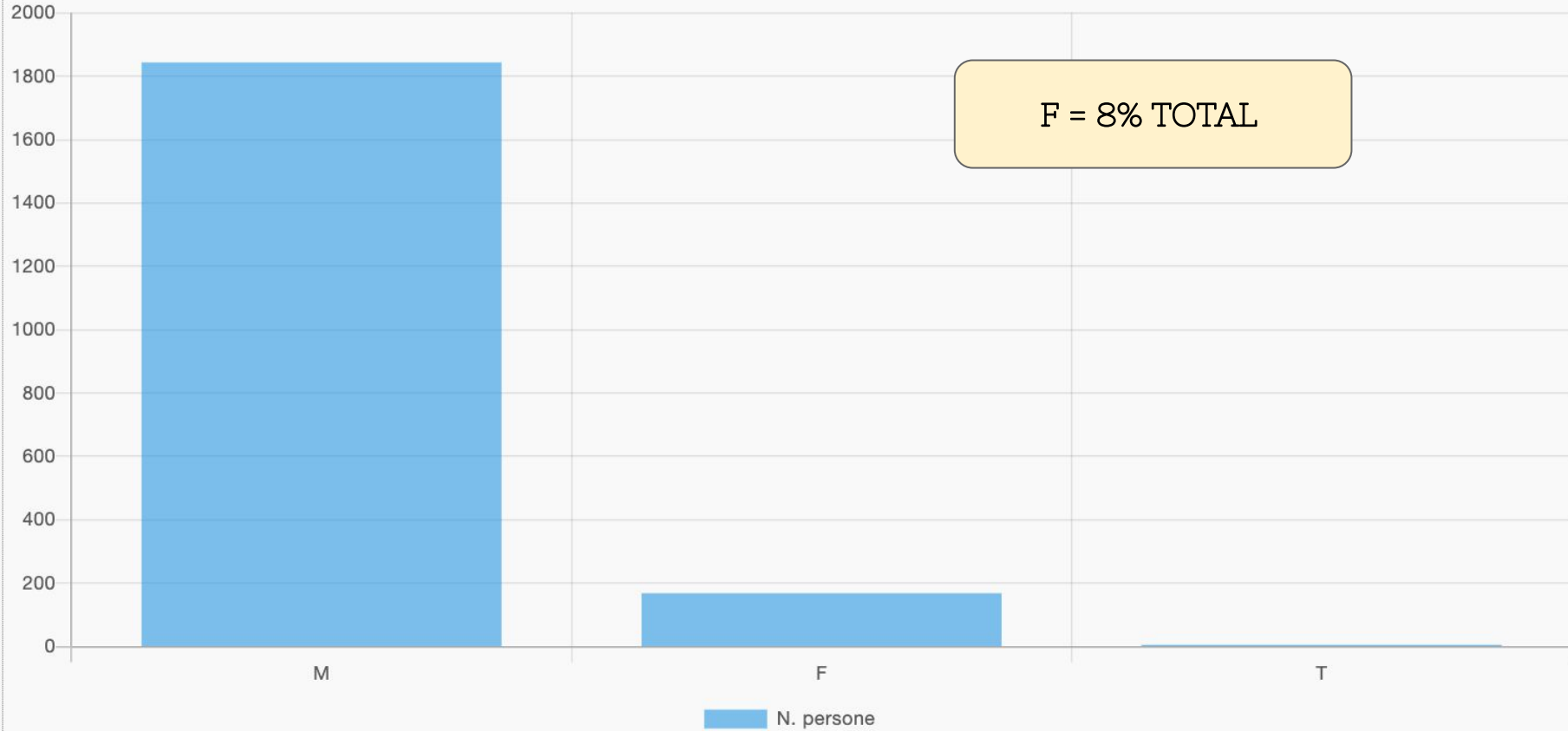
2.041

Individual persons (same person once)

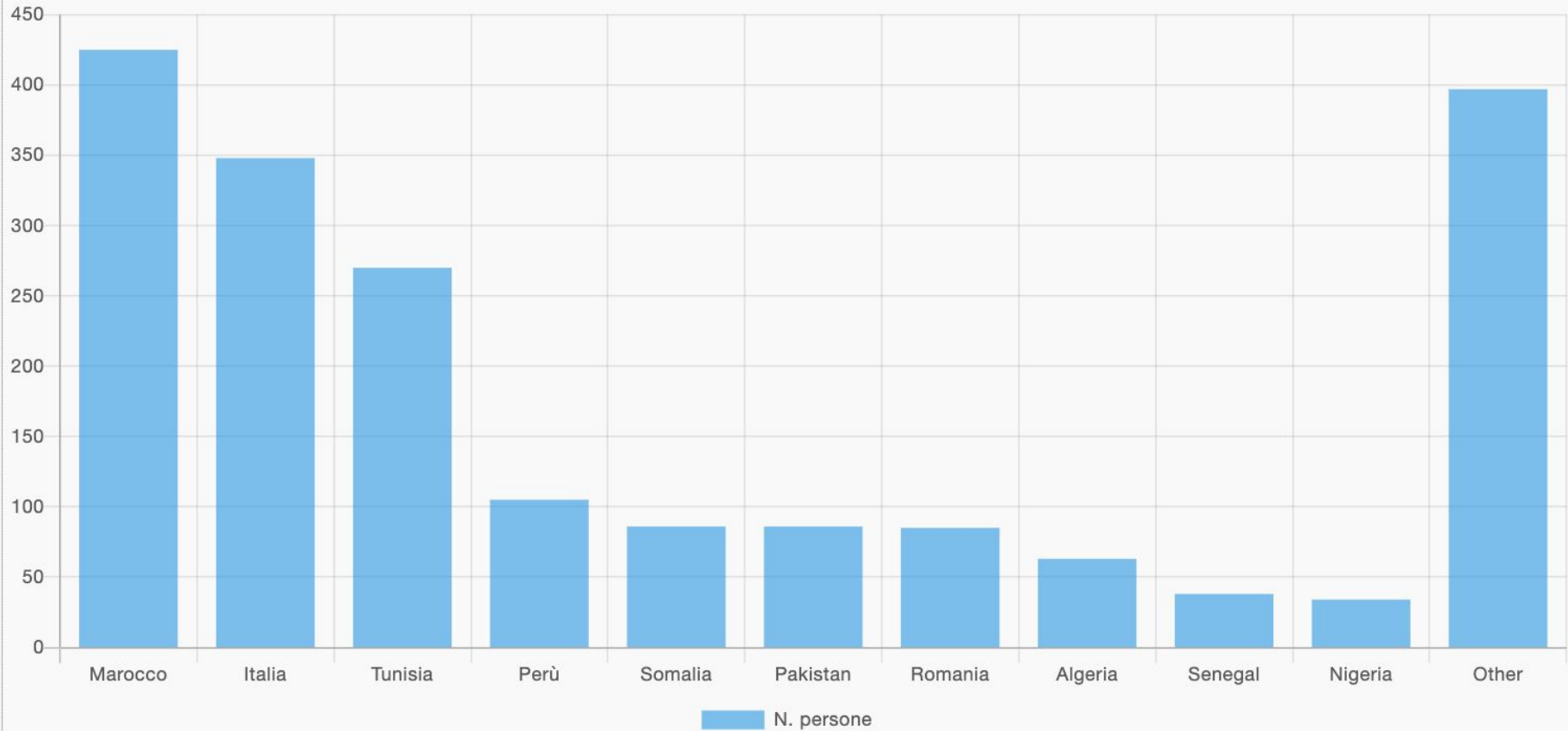
Genere



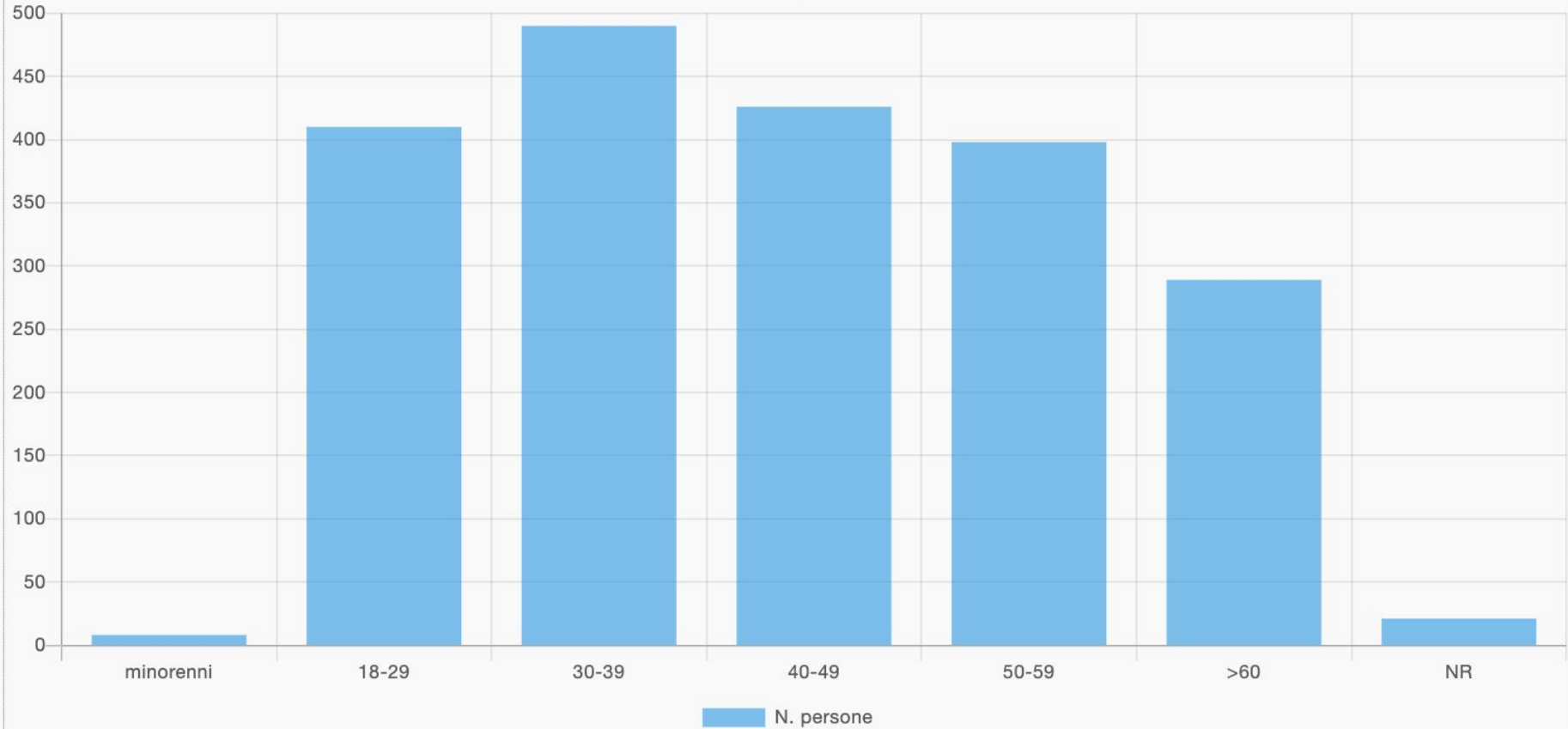
Genere



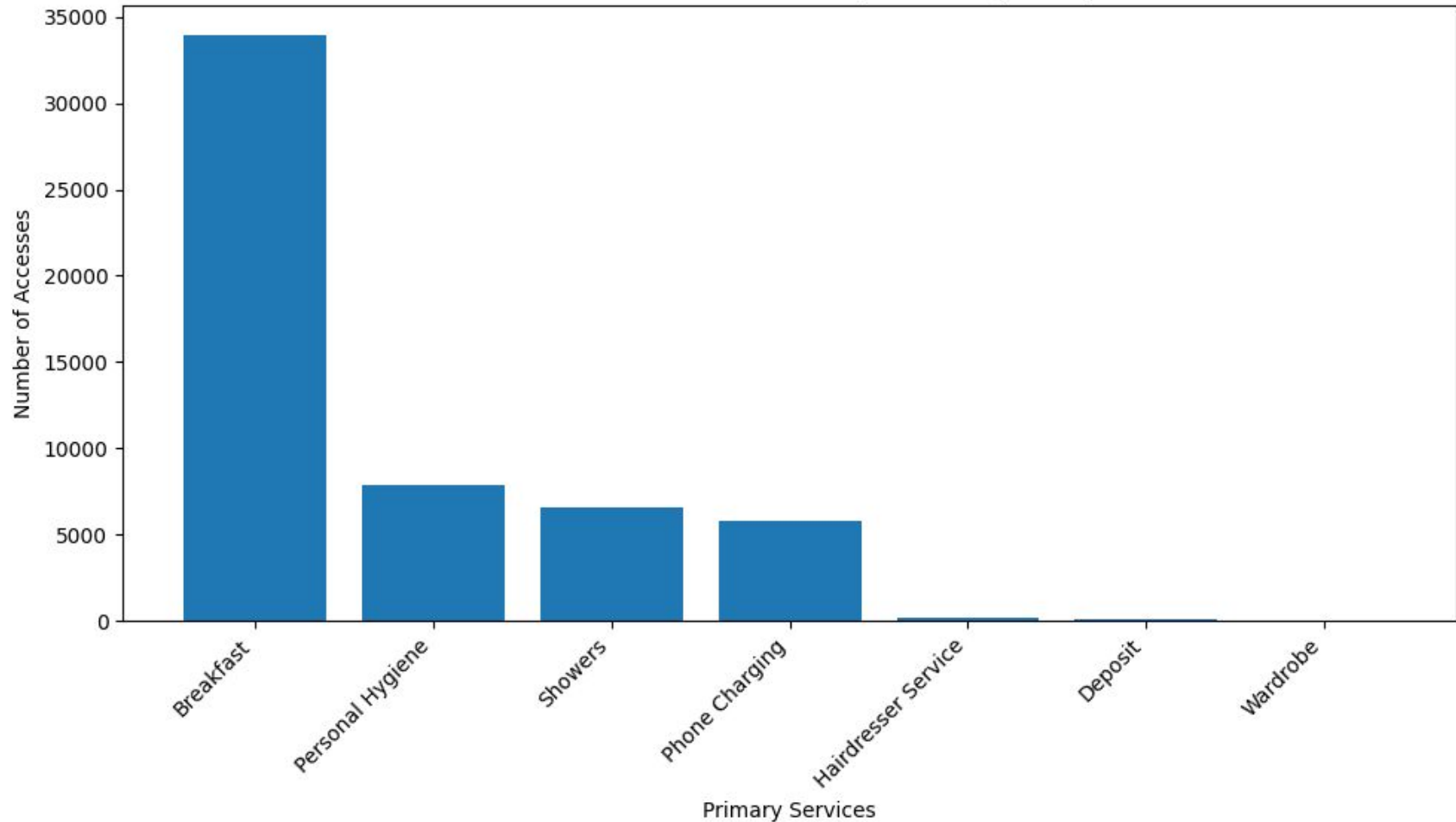
Nazione di nascita



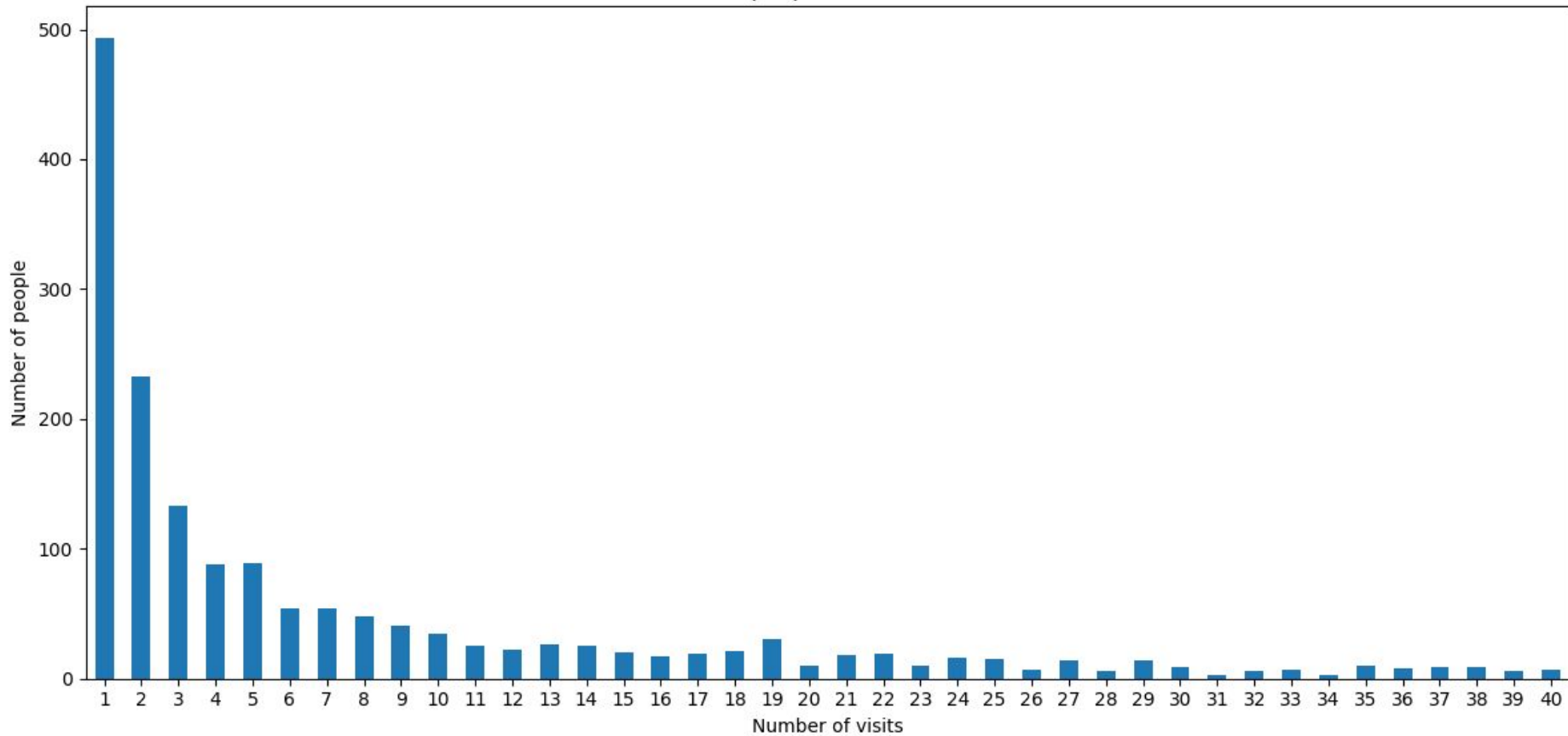
Età



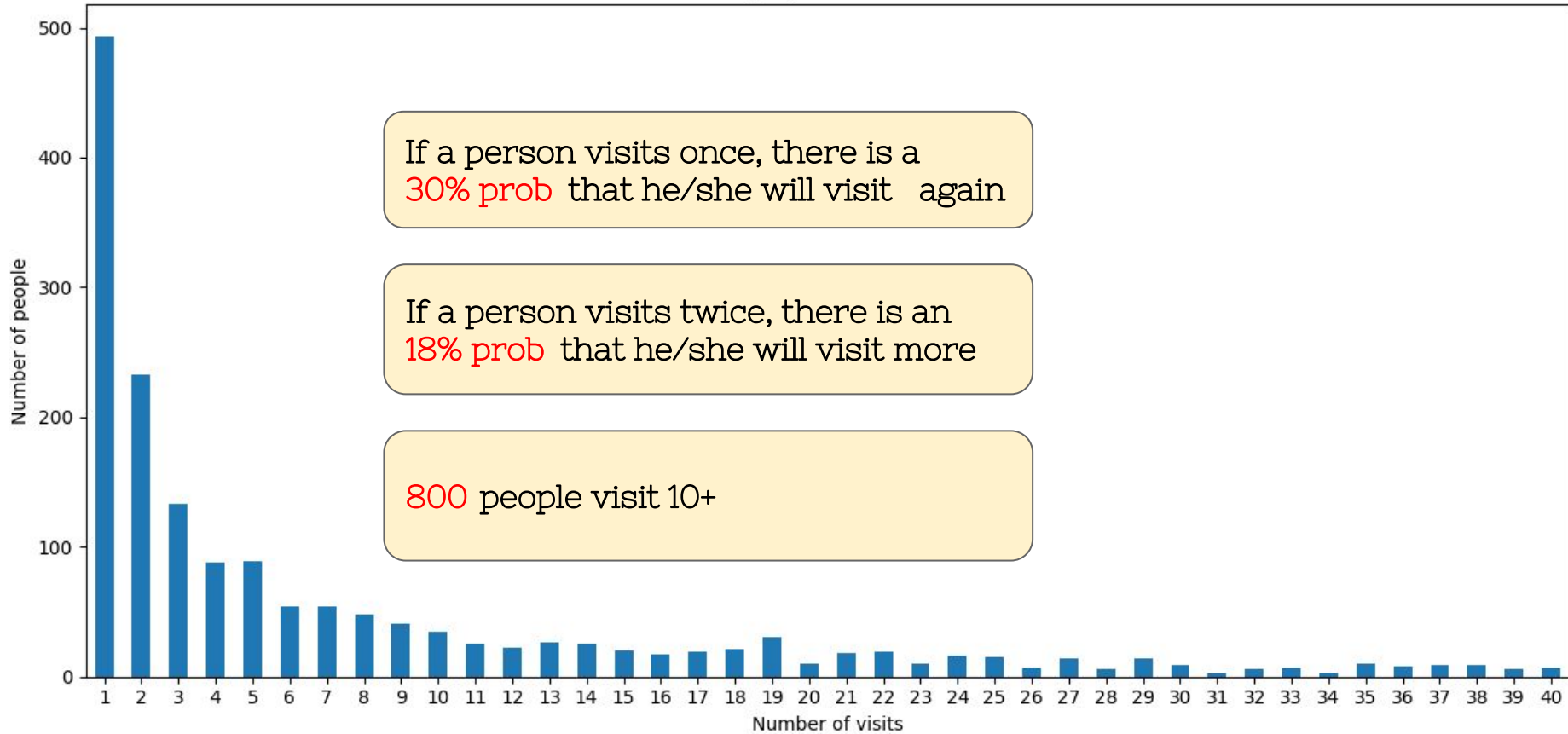
Number of Accesses to Primary Services (Sorted)



Number of people with 1 to 40 visits



Number of people with 1 to 40 visits



3

Future developments

Future developments

- **Extend to other organisations** in Florence area and possibly elsewhere
- **Extend data schema** to improve management of services
- **Improve analysis** to
 - Monitor individual progress
 - Better understanding
- **Increase AI functionalities**
 - Analysis of unstructured data
 - Improve service delivery

Thanks!

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