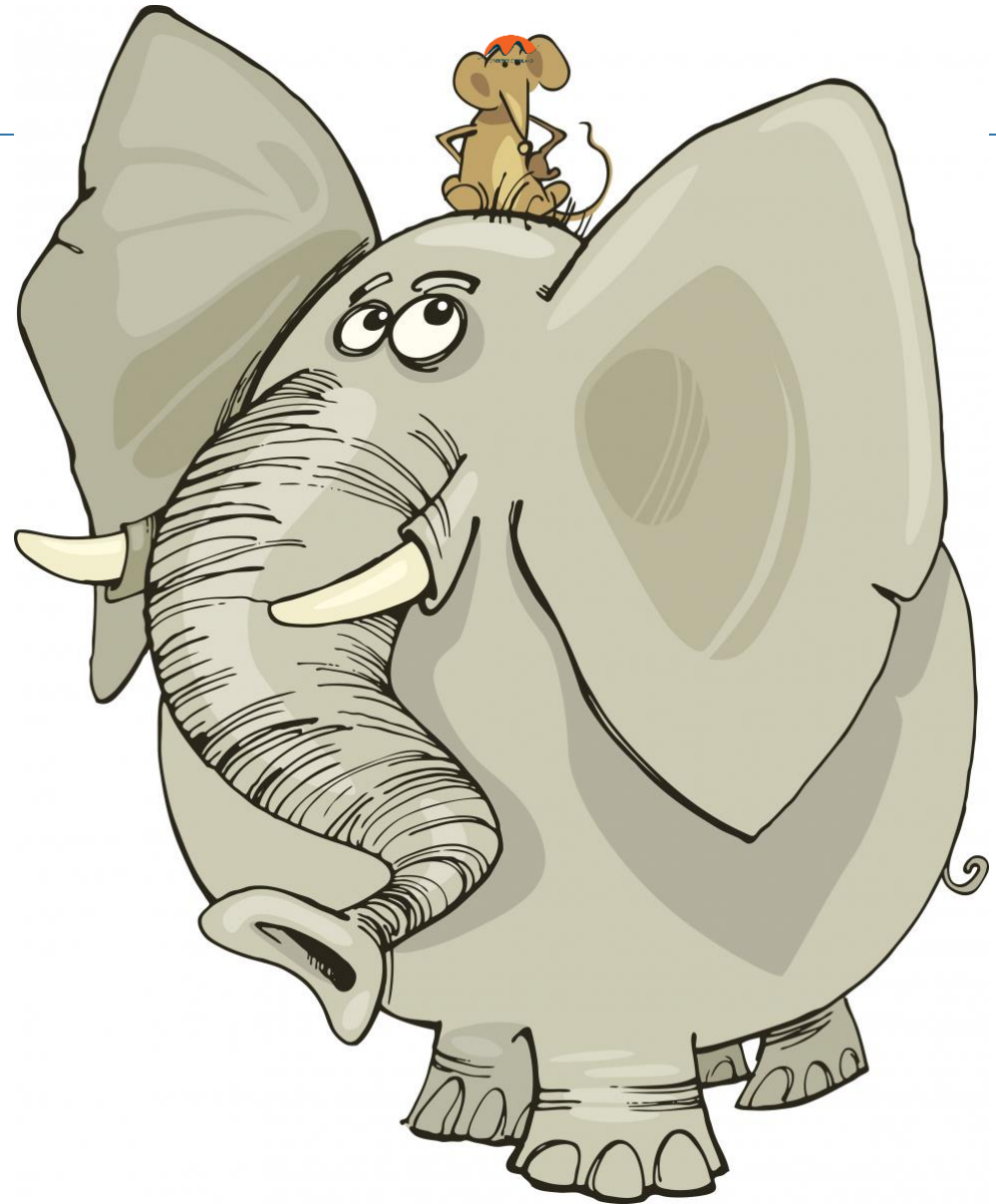


Case: Population Accounts

Lars Pedersen

Takeaway 1:
NSIs in the Nordics
are all small !

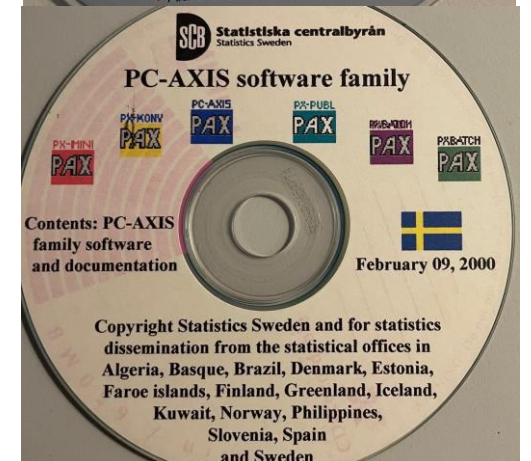
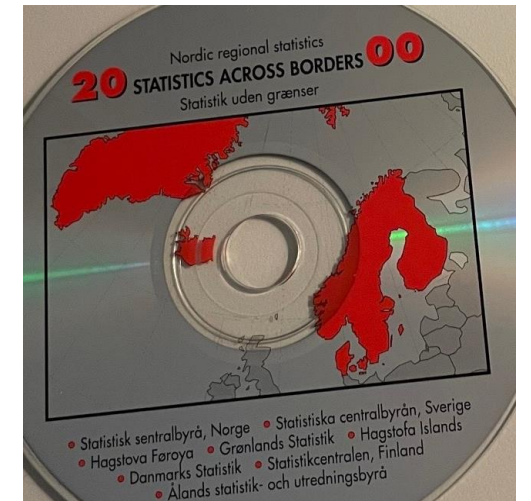
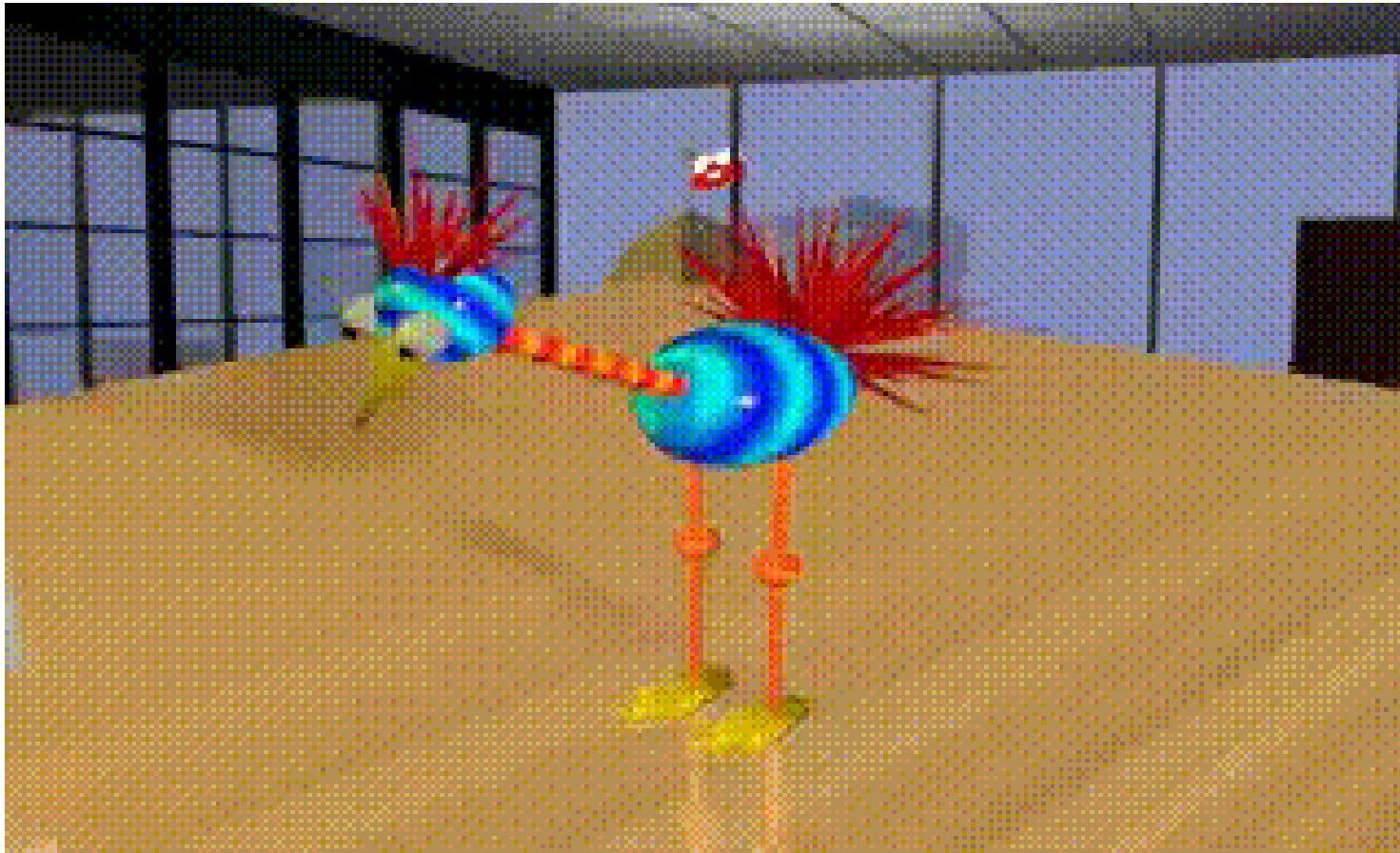
Some are smaller
than others



1992-2022 : 30+ years of Nordic cooperation



Memory Lane



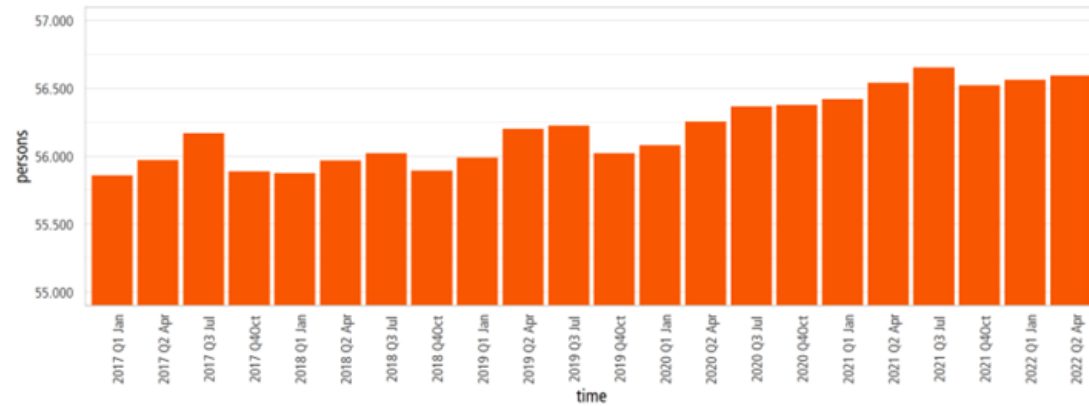


PxwebAPI V1

2016

Saved queries (2019v1)

Graph 1. Population size. January 2017 - 2022Q2



Source: Statistics Greenland - See table in StatBank <https://bank.stat.gl/BEESTK1>

Table 1. The population in municipalities

	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2
Hele landet	56.367	56.379	56.421	56.541	56.653	56.523	56.562	56.595
Kommune Kujalleq	6.458	6.478	6.454	6.409	6.363	6.320	6.292	6.273
Kommuneqarfik Sermersooq	23.211	23.354	23.462	23.632	23.674	23.864	23.861	23.964
Qeqqata Kommunia	9.376	9.305	9.305	9.251	9.255	9.258	9.257	9.273
Kommune Qeqertalik	6.343	6.350	6.312	6.274	6.278	6.176	6.180	6.136
Avannaata Kommunia	10.907	10.818	10.820	10.830	10.914	10.838	10.908	10.887

Source: Statistics Greenland - See table in StatBank <https://bank.stat.gl/BEESTK3>

With the exception of information on few deaths, information on births and deaths are reported very quickly. Due to a lower number of deaths, the total birth surplus (births minus deaths) was 67 persons in the first 3 months of the year.

Population in Districts and Municipalities. Quarterly report 2017-2022 [BEESTK3]

Choose variables

▼ About table List view

Age

▼ -- Select classification --

Select all Deselect all

→ Go to: Select values from group

Search

Beginning of word

Selected 0 of total 100

Optional variable

0

1

2

3

4

5

Residence

Select all Deselect all

Selected 0 of total 3

Optional variable

Total

Town

Settlement

Place of birth

▼ -- Select classification --

Select all Deselect all

→ Go to: Select values from group

Search

Beginning of word

Selected 0 of total 10

Optional variable

Greenland

Faroe Islands

Denmark

NorDICS

Rest of Europe

Africa

District

Select all Deselect all

Search

Beginning of word

Selected 7 of total 25

Optional variable

Total

Kommune Kujalleq

Kommuneqarfik Sermersooq

Qeqqata Kommunia

Kommune Qeqertalik

Avannaata Kommunia

Gender

Select all Deselect all

Selected 0 of total 2

Optional variable

Men

Women

Time (primo) ^{mandatory*}

Select all Deselect all

Search

Beginning of word

Selected 8 of total 22

Optional variable

2022Q2

2022Q1

2021Q4

2021Q3

2021Q2

2021Q1



Goal 1: No Poverty

Economically disadvantaged **At-risk-of-poverty rate** Public funds

FN 121 Proportion of the population living in relative poverty

Hide

```
# Import
INXIU101_raw <-
  statgl_url("INXIU101", lang = language) %>%
  statgl_fetch(
    indicator = 2:4,
    time      = px_all(),
    .col_code = TRUE
  ) %>%
  as_tibble()

# Transform
INXIU101 <-
  INXIU101_raw %>%
  mutate(
    time = time %>% make_date(),
    indicator = indicator %>% as.factor() %>% fct_rev()
  )

# Plot
INXIU101 %>%
  ggplot(aes(
    x = time,
    y = value,
    fill = indicator
```

Method

Show table

Takeaway 2: Nobody lives forever

- Pxweb is a mature dissemination tool
- Enough opportunities to explore for many years to come
- Can an NSI profit from disseminating data?

Case: <Hardcore> Population Statistics

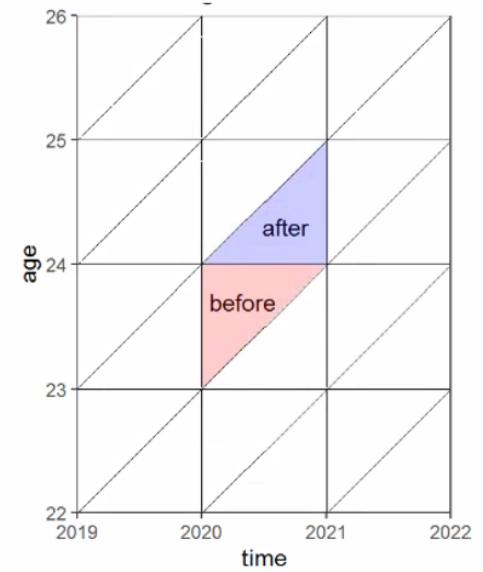
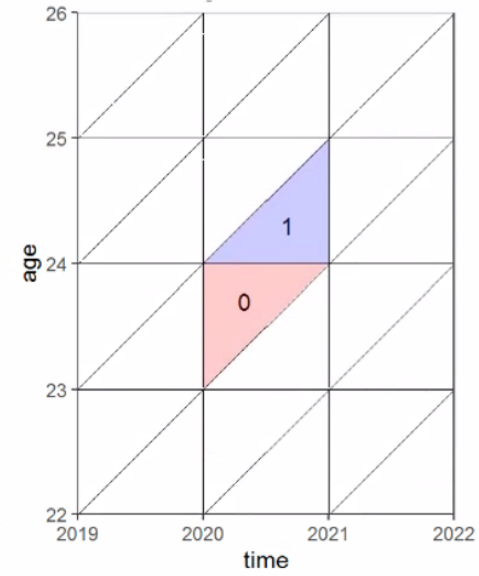
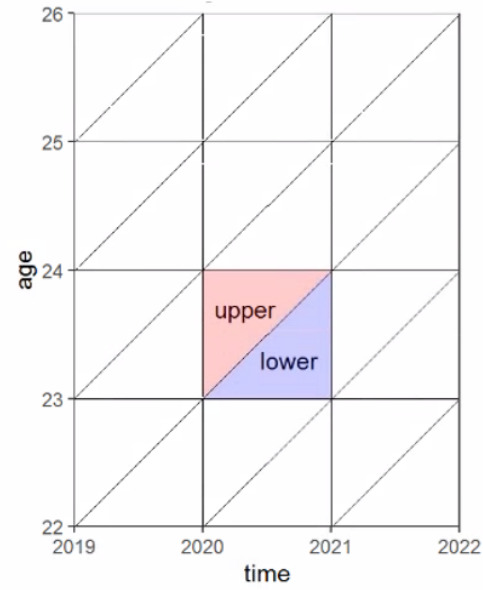
Nordic population accounts

	Population 1 January	Live births	Deaths	Natural population increase	Immigration	Emigration	Net migration	Population increase	Corrections	Population 31 december
2020										
Denmark	5,822,763	60,937	54,645	6,292	70,340	59,420	10,920	17,212	70	5,840,045
Faroe Islands	52,103	678	366	312	1,688	1,183	505	817	-24	52,896
Greenland	56,081	835	521	314	1,911	1,953	-42	272	68	56,421
Finland	5,525,292	46,463	55,488	-9,025	32,898	15,084	17,814	8,789	-288	5,533,793
Åland	29,884	261	291	-30	957	742	215	185	60	30,129
Iceland	364,134	4,512	2,307	2,205	10,429	7,994	2,435	4,640	18	368,792
Norway	5,367,580	52,963	40,611	12,352	38,075	26,744	11,331	23,683	106	5,391,369
Sweden	10,327,589	113,077	98,124	14,953	82,518	48,937	33,581	48,534	3,172	10,379,295

Demographic
events:
Availability in
Official
Nordic
Statbanks

	Sweden	Denmark	Finland	Norway	Iceland	Greenland	Faroe Islands	Åland
<i>age at event & age at end of year</i>								
Population January 1 st	✓	✓	✓	✓	✓	✓	✓	✓
Births	✗	✗	✗	✗	✗	✓	✓	✗
Death	✗	✗	✗	✗	✗	✓	✓	✗
Migrations	✗	✗	✗	✗	✗	✓	✓	✗
<i>age at event</i>								
Population January 1 st	✓	✓	✓	✓	✓	✓	✓	✓
Births	✓	✓	✓	✓	✓	✓	✓	✓
Death	✓	✓	✓	✓	✓	✓	✓	✓
Migrations	✓	✓	✓	✓	✓	✓	✓	✓
<i>age at end of year</i>								
Population January 1 st	✓	✓	✓	✓	✓	✓	✓	✓
Births	✗	✗	✗	✗	✗	✓	✗	✗
Death	✓	✗	✗	✗	✗	✓	✓	✗
Migrations	✗	✗	✗	✗	✗	✓	✗	✗

Lexis diagram



Vision a standard table structure. core & satellites

	2018	2019	2020	2021	2022
F. <= 10,000 inhabitants					
Population (start of year)	17,796	17,984	18,329	18,800	19,051
Birth	235	256	266	280	0
In migration	1,138	1,235	974	1,039	0
Out migration	1,315	1,347	1,081	1,186	0
Death	96	80	106	121	0
Net natural migration	1,625	1,681	1,662	1,637	0
Net migration	1,621	1,360	1,361	1,268	0
Overseas	24	-24	101	90	4
Population (end of year)	17,968	18,329	18,800	19,291	0

	F. <= 6,000 inhabitants																			
	Total	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	3	
2021																				
Female	138	0	0	0	0	1	1	4	2	5	7	7	4	9	10	9	10	8		
Male	142	0	0	0	0	2	2	5	3	3	2	5	2	6	5	9	9	8	1	
Total	280	0	0	0	0	3	3	9	5	8	9	12	6	15	15	18	19	16	2	

	F. 2: 50-199 inhabitants	F. 3: 200-499 inhabitants	F. 4: 700-2,999 inhabitants	F. 5: 3,000-6,000 inhabitants	F. 6: >6,000 inhabitants	Total
2021						
F. 2: 50-199 inhabitants	9	118	103	230	98	548
F. 3: 200-499 inhabitants	109	0	240	188	129	666
F. 4: 700-2,999 inhabitants	0	247	8	501	489	1,475
F. 5: 3,000-6,000 inhabitants	230	214	0	0	549	1,003
F. 6: >6,000 inhabitants	138	188	0	113	1,627	2,166
Total	465	767	1,351	1,734	1,268	3,385



table has:

1M cells

20M with regions

Year of birth

Select all Deselect all

Search

Beginning of word

Selected 0 of total 148

Optional variable

1875
1876
1877
1878
1879
1880

Place of birth

Select all Deselect all

Selected 0 of total 3

Optional variable

Total
Greenland
Outside Greenland

Event Mandatory*

Select all Deselect all

Search

Beginning of word

Selected 0 of total 7

Population (start of year)
Birth
Immigration
Emigration
Death
Correction

Gender

Select all Deselect all

Selected 0 of total 3

Optional variable

Total
Female
Male

Triangles(lexis)

Select all Deselect all

Selected 0 of total 2

Optional variable

Upper
Lower

Time Mandatory*

Select all Deselect all

Search

Beginning of word

Selected 1 of total 50

2022
2021
2020
2019
2018
2017

```

library(tidyverse)
library(MortalityLaws)

data_raw <- read_csv("https://bank.stat.gl/sq/c5c9592c-223f-4cb2-9ce6-461478c00e7
locale = locale(encoding = "latin1")) %>%
  filter(age<90) %>%
  mutate(rates=as.numeric(Mortalityrates)) %>%
  select(age,rates)

x <- 0:89
radix <- 1000
dataframe <- LifeTable(x, qx = data_raw$rates, lx0 = radix)
head(dataframe$lt, 5)

```



R Markdown ↕

e Terminal x Jobs x

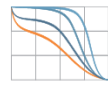
4.1.3 · S:/STATBEFO/GS Produktion/6. Fremskrivning/2022/Fremskrivning/Do_PX/LT/ ↗

```

nt x          mx          qx          ax          lx          dx          Lx          Tx          ex
1) 0 0.011040725 0.01098 0.4990799 1000.0000 10.980000 994.4999 67647.72 67.64772
2) 1 0.001821658 0.00182 0.4998482  989.0200  1.800016 988.1197 66653.22 67.39320
3) 2 0.002412909 0.00241 0.4997989  987.2200  2.379200 986.0299 65665.10 66.51517
4) 3 0.001811640 0.00181 0.4998490  984.8408  1.782562 983.9492 64679.07 65.67465
5) 4 0.000000000 0.00000 0.4998490  983.0582  0.000000 983.0582 63695.12 64.79283

```


*Extract
Access*



HMD

HOME PROJECT PEOPLE

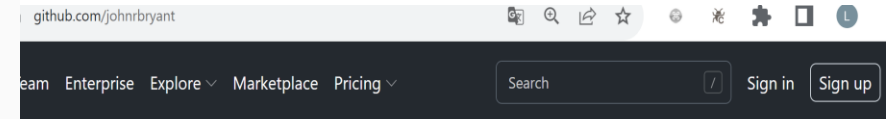
Human Mortality Database

Bayesian
Demography
Limited

John Bryant
johnrbryant

Follow

Bayesian demographer and data scientist



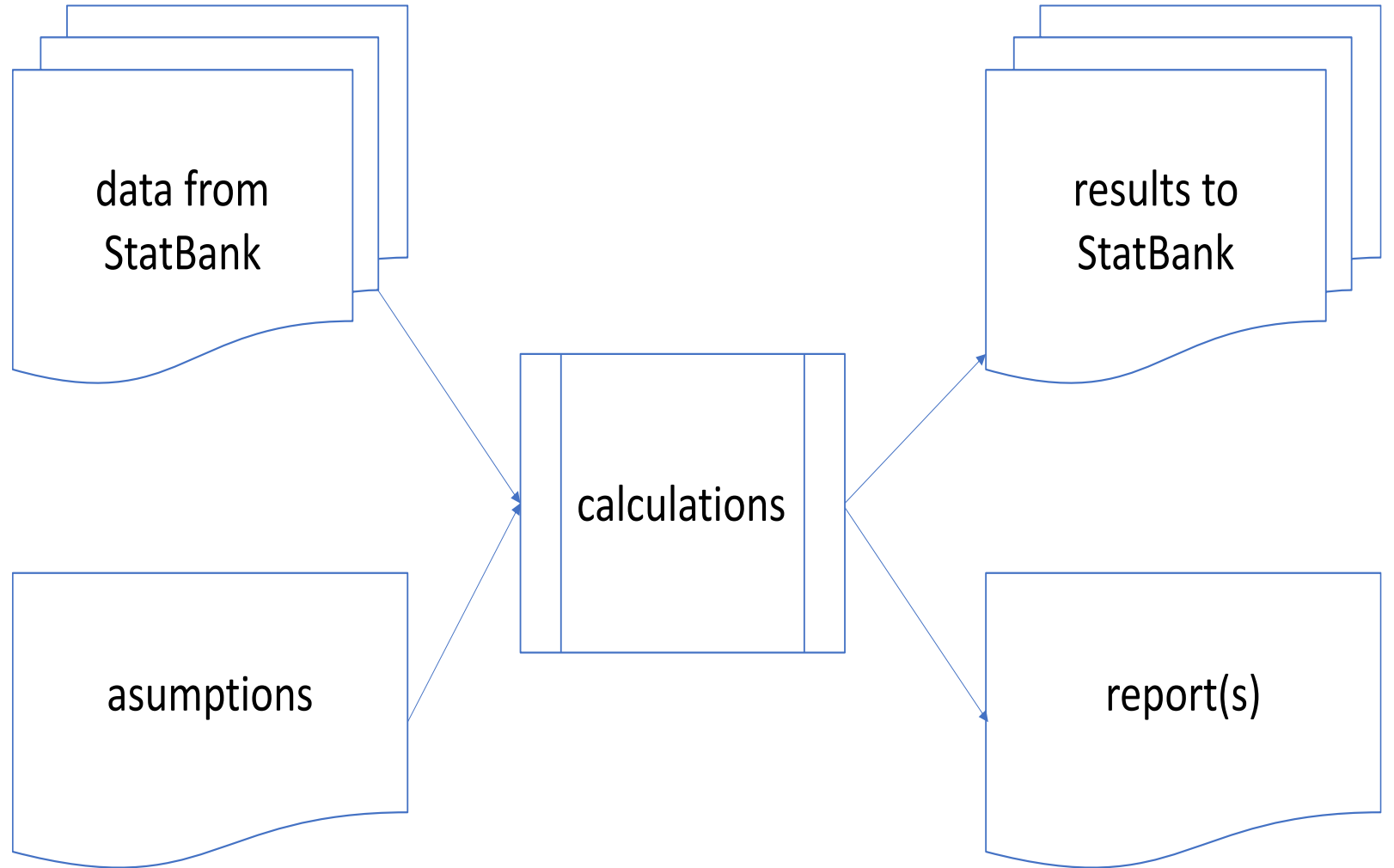
Overview Repositories 17 Projects Packages Stars

Popular repositories

Demographic-Account-for-Greenland Public Demographic account for Greenland TeX ☆ 1	nzreg Public R
hmd Public R	bdefdata Public R
nzacc Public R	indigenous_small_domain Public R

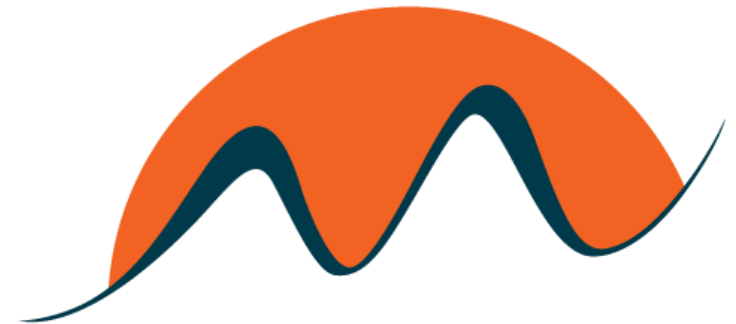


*Model for
Population
Projections*





HAGSTOVA FØROYA
Statistics Faroe Islands



STATISTICS GREENLAND

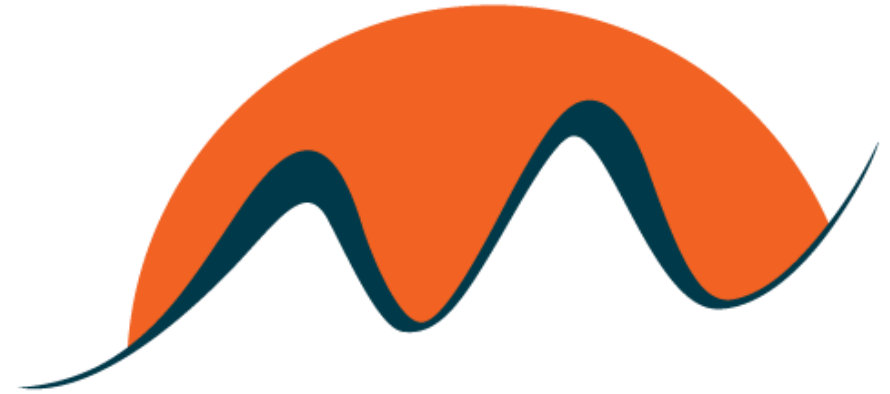
Expected benefits

- shared model core, open source
- code base in R
- learn by comparing
- improve quality
- increased resources
- adds professionalism
- no competing models
- expanded user base



Búskapurarráðið

NSM 2022



STATISTICS GREENLAND



HAGSTOVA FØROYA
Statistics Faroe Islands



EUROPE · Published August 16, 2019 10:53am EDT

Greenland says it's 'open for business, not for sale' after Trump purchase report

POLITICS

Greenland Tells Trump: 'We're Open for Business, Not for Sale'

Danish leaders dismiss President Trump's interest in purchasing the island; 'It must be an April Fool's Day joke'

'Open for business, not for sale': Greenland tells Donald Trump

No thanks, we're not for sale, aghast Greenland tells Trump

Greenland tells Trump it is open for business but not for sale

Greenland open for business with US, but not for sale — Foreign Ministry

