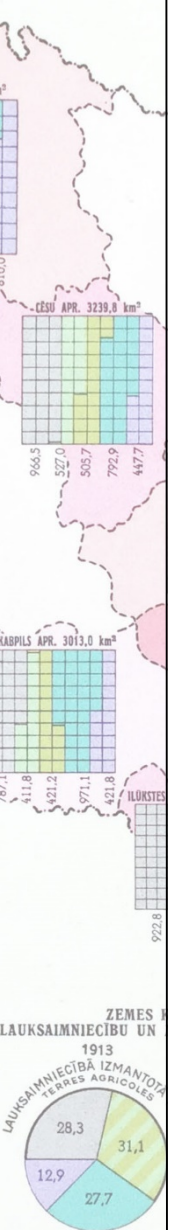


Modern storytelling through  
infographics in early  
statistical atlases

# Infographics

## What are infographics exactly?

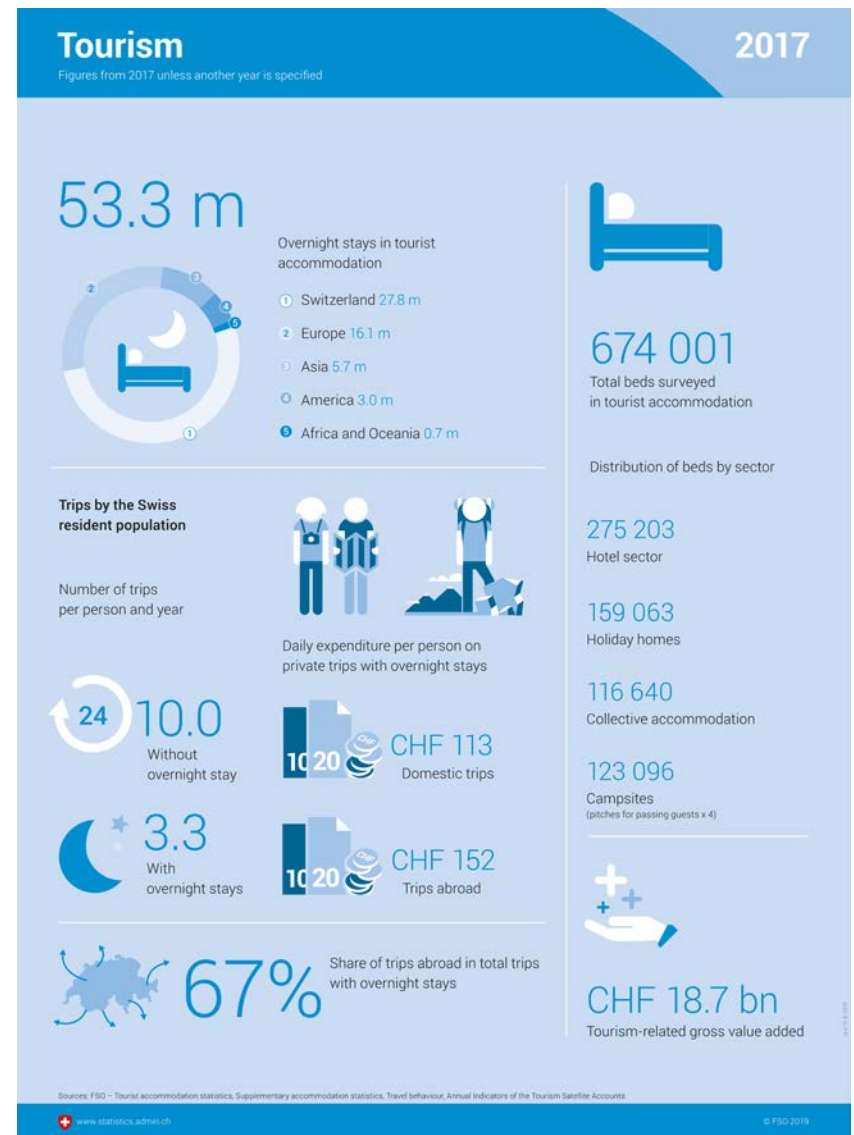
- «a **visual** representation of **information** or **data**» (*wikipedia*)
- «graphic **visual** representations of **information**, **data** or **knowledge** intended to present information quickly and clearly» (*wikip.*)
- «a **visual** representation of **information** which aims to make the **data** easily understandable at a first glance» (*icons8.com*)
- «Effective infographics tell a **story**» (*visualstorytell.com*)
- **Storytelling** = social and cultural activity of sharing stories (the narrative is the key; the story is usually complete and covers the «whole image») → in modern media often used for marketing or educational purposes.
- **Elements** of infographics: charts, maps, icons, images, text (similar to atlas components)



# Infographics

## Types of infographics

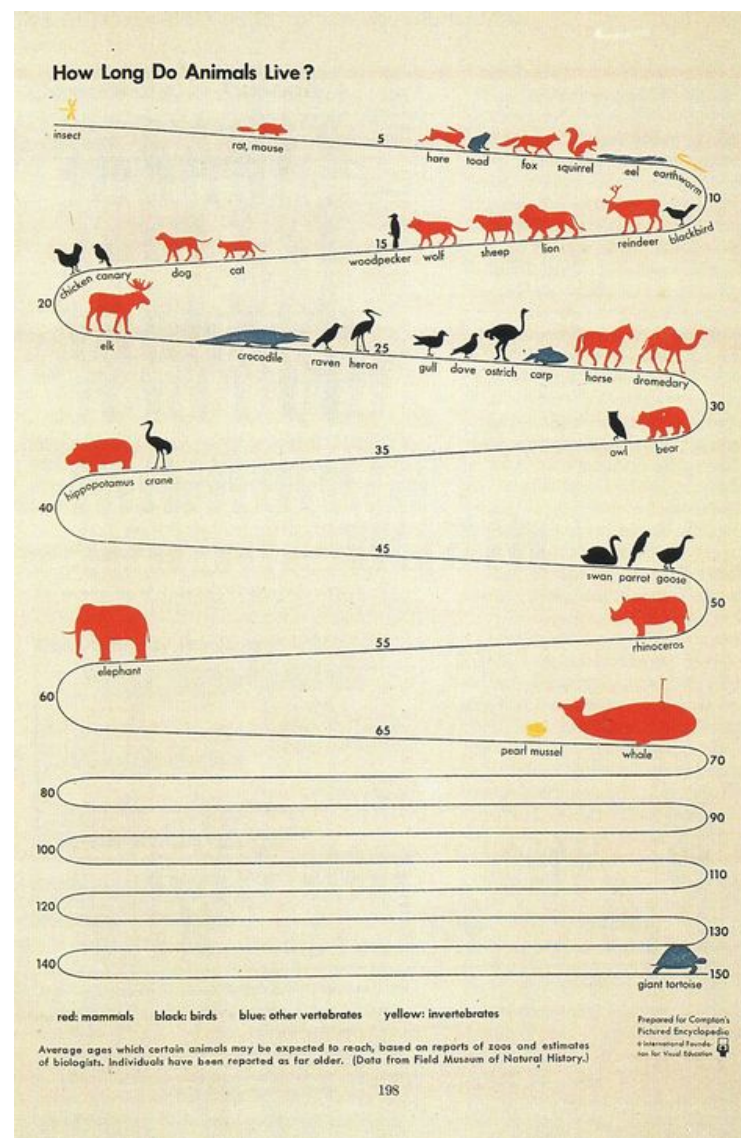
- Statistical Infographics
- Geographical Infographics
- Timelines Infographic
- Process Infographic
- Hierarchical Infographics
- Network Infographics
- Comparison Infographics
- Informational Infographic



# Infographics

## Types of infographics

- Statistical Infographics
- Geographical Infographics
- Timelines Infographic
- Process Infographic
- Hierarchical Infographics
- Network Infographics
- Comparison Infographics
- Informational Infographic





# Infographics

## Carte Figurative des pertes successives en hommes de l'Armée Française dans la campagne de Russie 1812-1813.

Révisé par M. Minard, Inspecteur Général des Ponts et Chaussées en retraite. Paris, le 20 Novembre 1869.

Les nombres d'hommes présents sont représentés par les larges des zones colorées à raison d'un millimètre pour dix mille hommes; ils sont de plus écrits en travers des zones. Le rouge désigne les hommes qui entrent en Russie, le noir ceux qui en sortent. Les renseignements qui ont servi à dresser la carte ont été puisés dans les ouvrages de M. M. Chiers, de Léger, de Fezensac, de Chambray et le journal inédit de Jacob, pharmacien de l'Armée depuis le 28 Octobre.

Pour mieux faire juger à l'œil la diminution de l'armée, j'ai supposé que les corps du Prince Jérôme et du Maréchal Davoust qui avaient été détachés sur Minsk et Mohilew et qui rejoignent vers Orscha et Witebsk, avaient toujours marché avec l'armée.

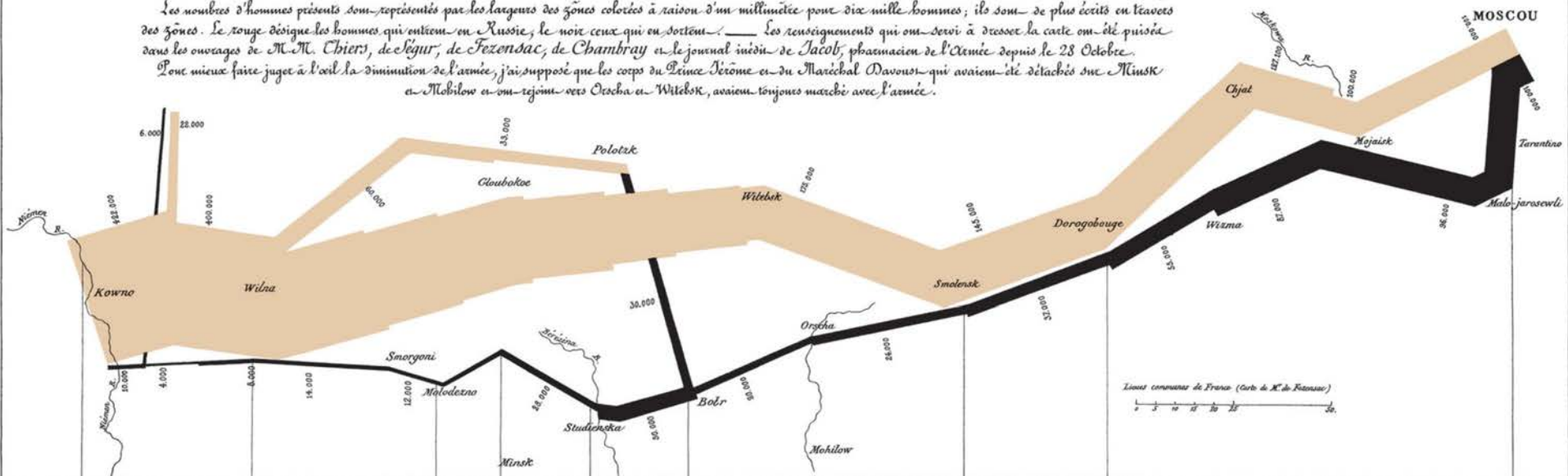
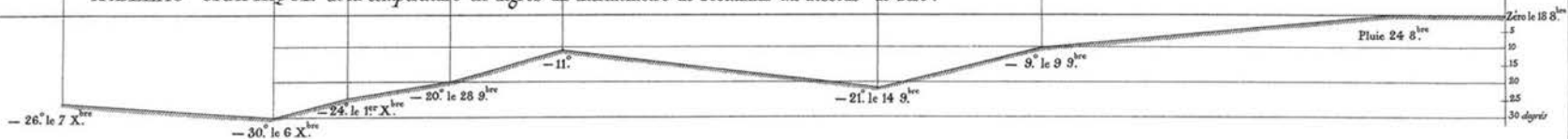


TABLEAU GRAPHIQUE de la température en degrés du thermomètre de Réaumur au dessous de zéro.



Les Cosaques passent au galop le Niémen gelé.

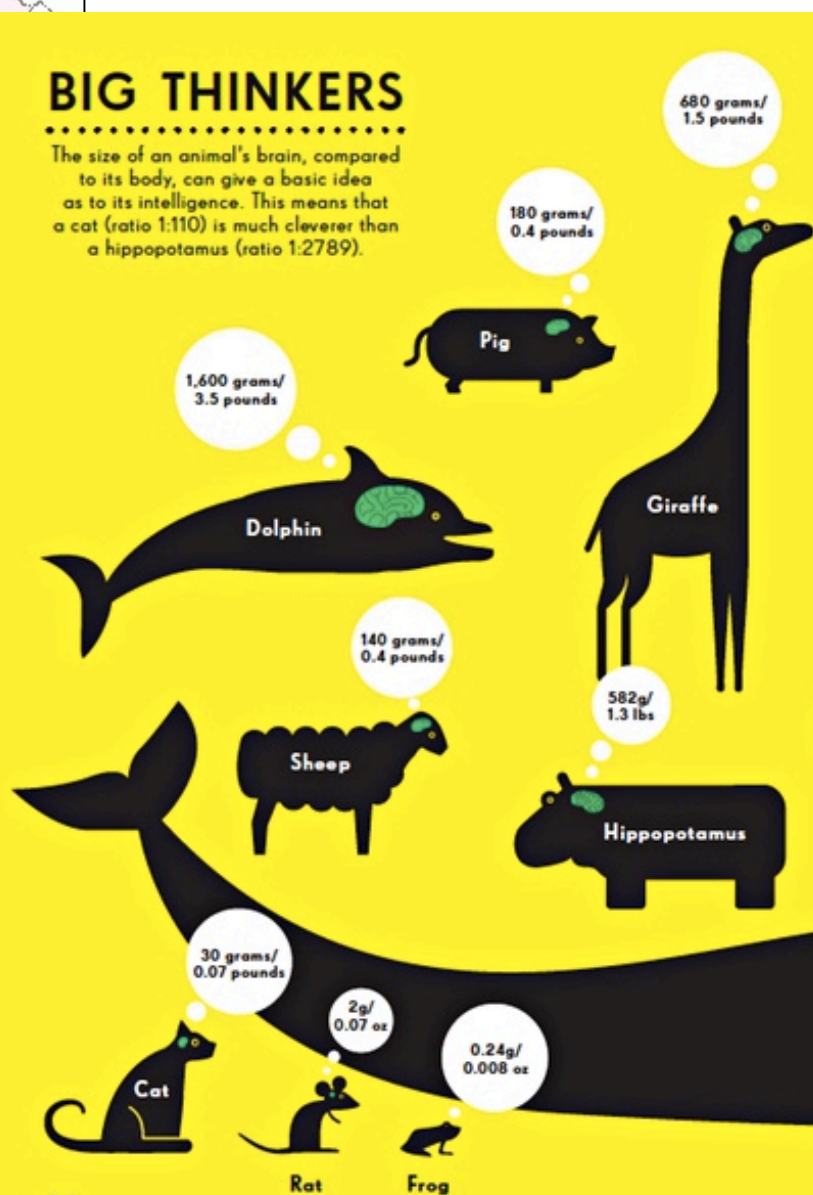
Anst. par Regnier, 8. Par 3. Marie St. O. à Paris.

Imp. Lith. Regnier et Boudet.



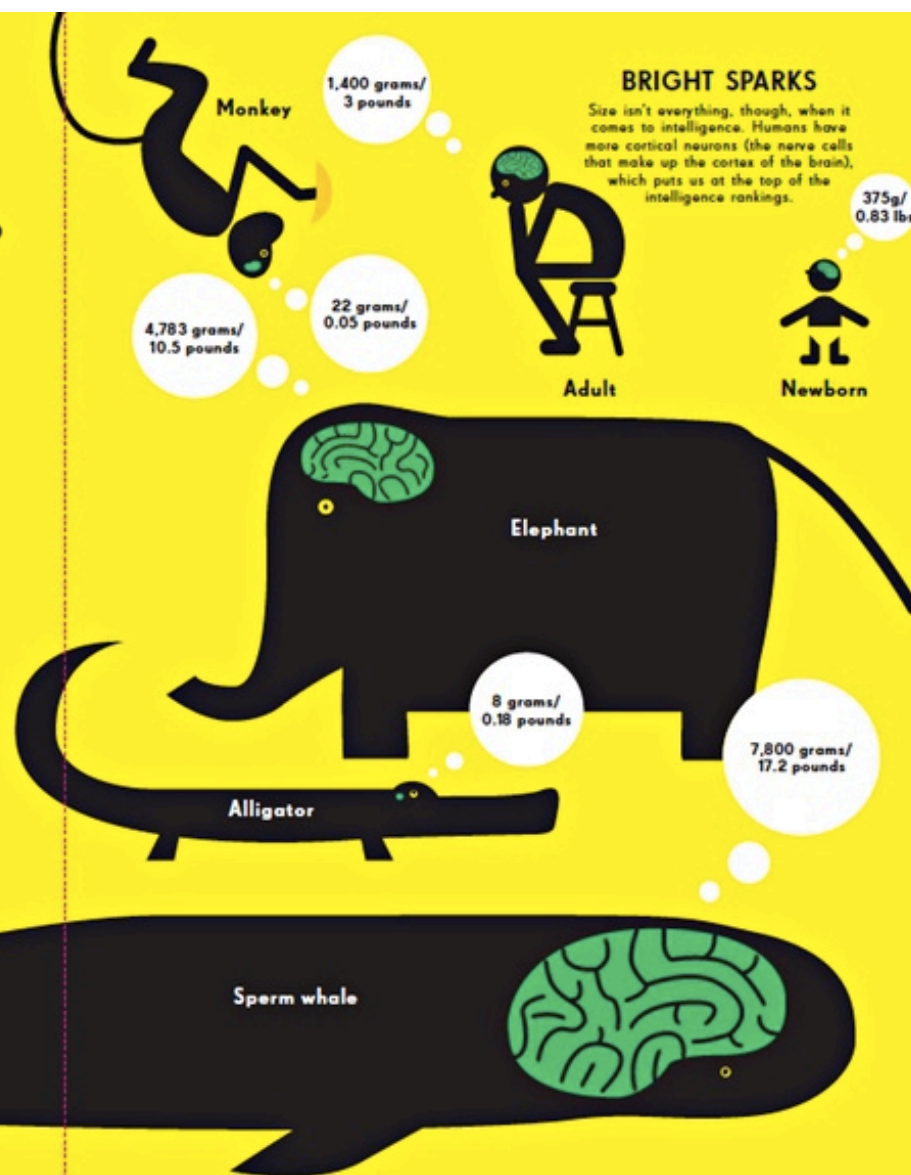
## BIG THINKERS

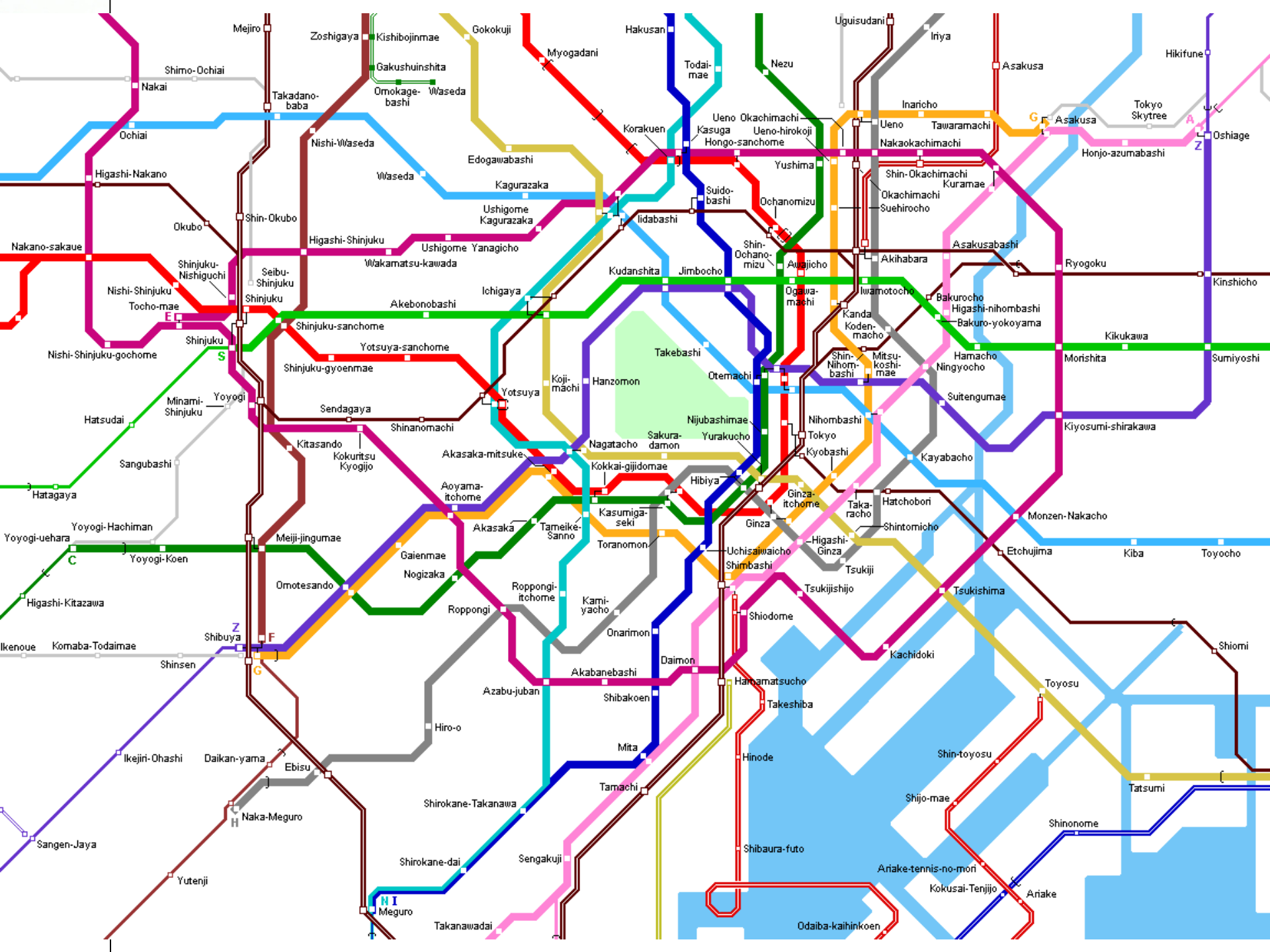
The size of an animal's brain, compared to its body, can give a basic idea as to its intelligence. This means that a cat (ratio 1:110) is much cleverer than a hippopotamus (ratio 1:2789).



## BRIGHT SPARKS

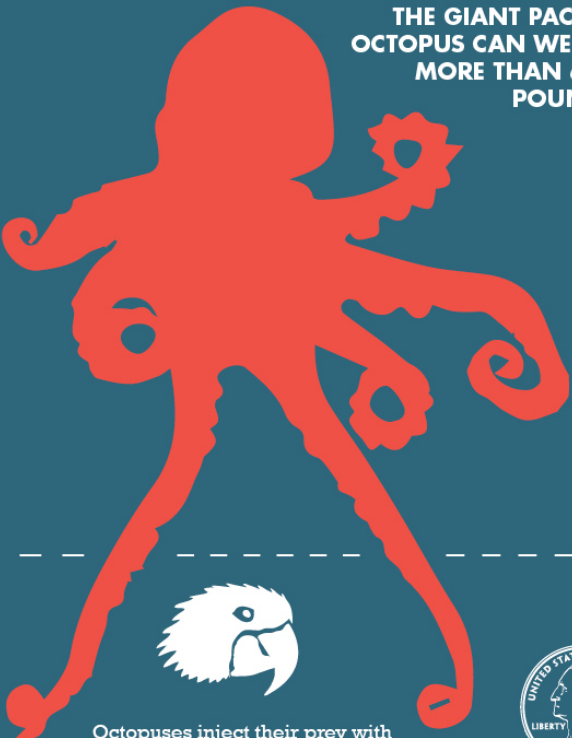
Size isn't everything, though, when it comes to intelligence. Humans have more cortical neurons (the nerve cells that make up the cortex of the brain), which puts us at the top of the intelligence rankings.





# WORLD OCTOPUS DAY

THE GIANT PACIFIC OCTOPUS CAN WEIGH MORE THAN 600 POUNDS



Octopuses inject their prey with venom using a beak similar to a bird's made from the same tough material as a lobster shell.



BECAUSE THEY DON'T HAVE BONES, EVEN LARGE OCTOPUSES CAN FIT THROUGH AN OPENING THE SIZE OF A QUARTER



ALL SPECIES ARE VENOMOUS, BUT THE BLUE-RINGED OCTOPUS IS THE ONLY ONE DANGEROUS TO HUMANS, RESPONSIBLE FOR AT LEAST TWO DEATHS.

one hundred thousand IS THE MAXIMUM NUMBER OF EGGS THAT A FEMALE OCTOPUS CAN LAY, BUT THE AVERAGE LITTER SIZE IS ONLY 80.

## OCTOPUSES VS. OCTOPI

THE PLURAL IN ENGLISH IS "OCTOPUSES," BUT THE GREEK PLURAL FORM "OCTOPODES" IS SOMETIMES USED. "OCTOPI," WHILE COMMONLY USED, IS CONSIDERED INCORRECT.



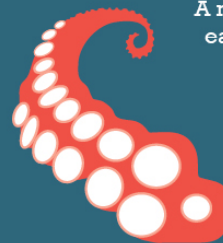
AN OCTOPUS HAS 3 HEARTS



OCTOPUSES ARE ABOUT **90%** MUSCLE



THE GIANT PACIFIC OCTOPUS CAN INHABIT DEPTHS OF UP TO 5,000 FEET



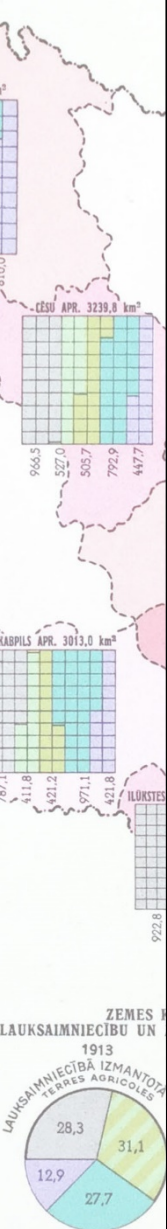
A mature female octopus can have up to 280 suckers on each arm! Each sucker contains thousands of chemical receptors, with sensitivities to both touch and taste.

OCTOPUSES CAN QUICKLY CHANGE THE **COLOR** AND **TEXTURE** OF THEIR SKIN

**300**  
RECOGNIZED  
**SPECIES**  
OF OCTOPUS







# Infographics & visual storytelling

## When did infographics come up?

- **Infographics are not new.** Cave-drawings or Egyptian hieroglyphics can be regarded as early infographics.





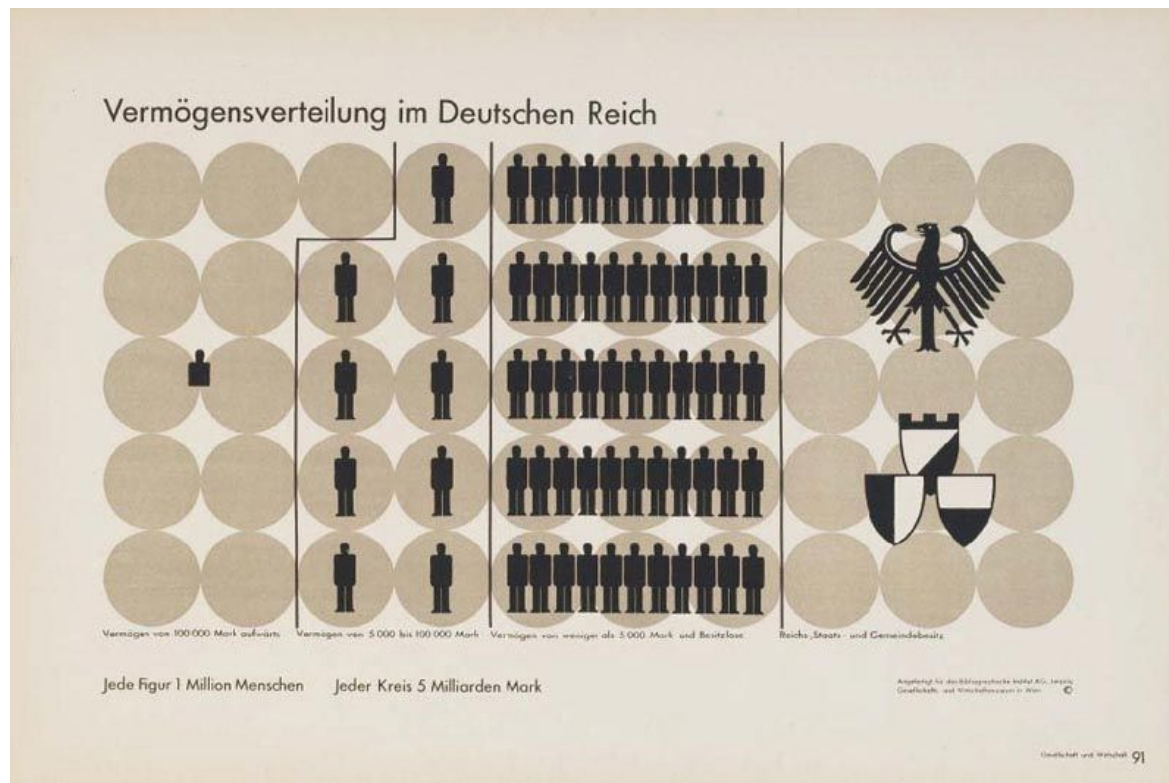
# Infographics & visual storytelling



# Infographics & visual storytelling

## When did infographics come up?

- **Breakthrough:** 1920s with pictorial statistics (isotypes).



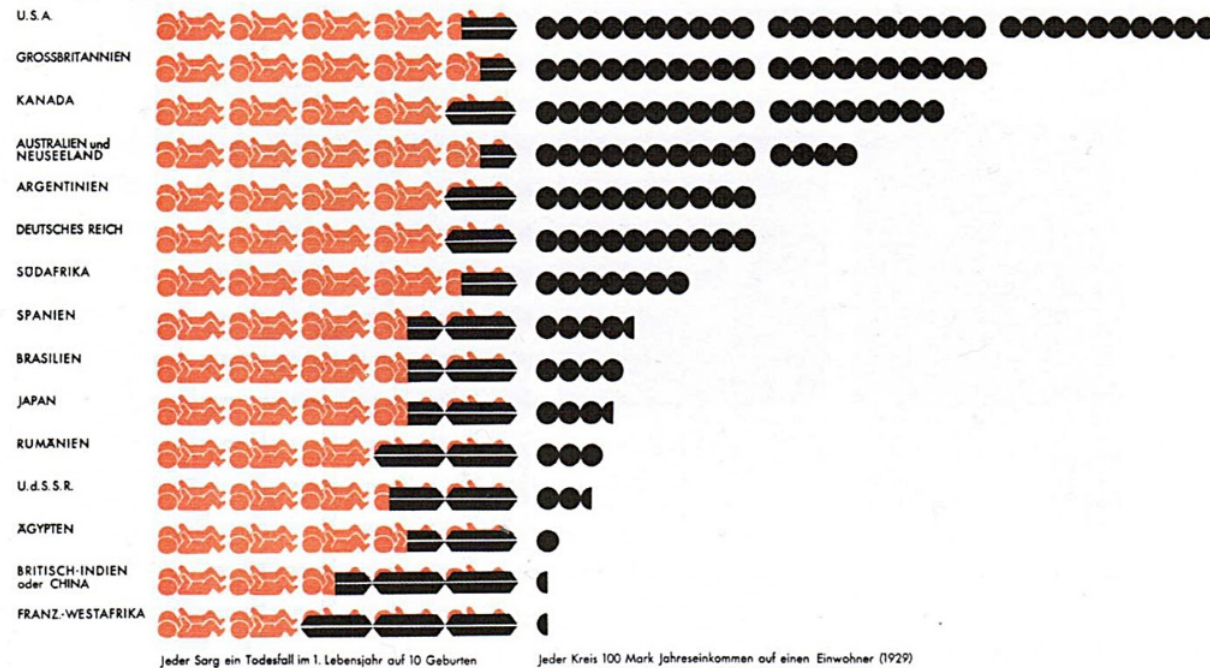


# Infographics & visual storytelling

## When did infographics come up?

- **Breakthrough:** 1920s with pictorial statistics (isotypes).

### Säuglingsterblichkeit und Einkommen



# Home and Factory Weaving in England

1820



1830



1845



1860



1880



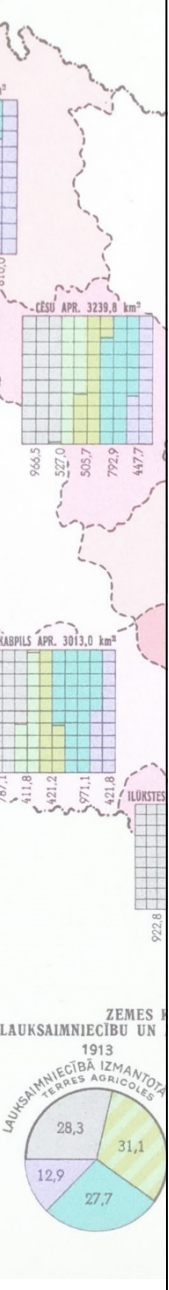
Each blue symbol represents 50 million pounds total production  
Each black man symbol represents 10,000 home weavers  
Each red man symbol represents 10,000 factory weavers



# Infographics & visual storytelling

## Infographics as modern means of storytelling

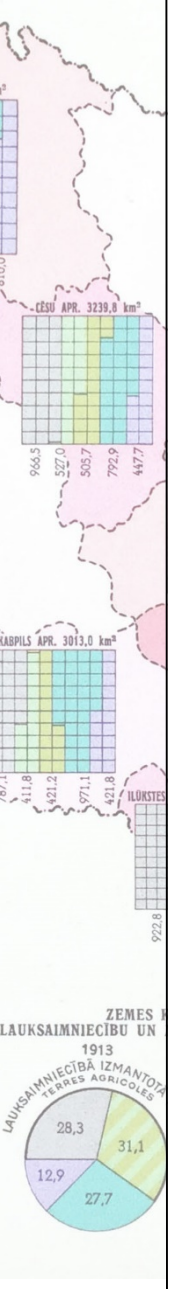
- Infographics have evolved rapidly in recent years and are used commonly for **mass communication** and for a broader audience. This is due to
  - lower production costs
  - freely available graphics software
  - (free) visual distribution channels (e.g. Social media)
  - their simplicity and effectiveness in communication (even with complex subjects)
  - an audience acquainted to visual information in their every-day consumption of information



# Infographics

## The relationship of infographics and atlases

- (1a) Maps as parts of infographics
- (1b) Components of infographics in maps & atlases
- (2) Atlases about infographics
- **(3) Infographics as parts of atlases (stories)**

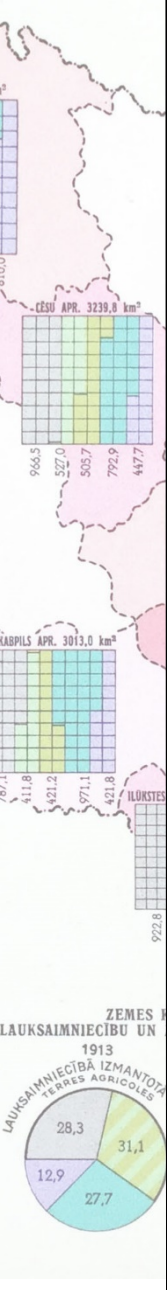




# Infographics

## The relationship of infographics and atlases





# Infographics

## The relationship of info

- (1a) Maps as parts of i
- (1b) Components of in
- (2) Atlases about infog
- (3) Infographics as p

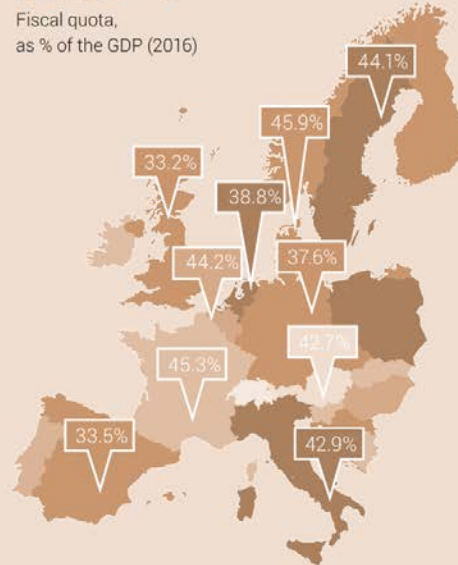
## Public finances

Figures from 2017 unless another year is specified

2017

27.8%

Fiscal quota,  
as % of the GDP (2016)



CHF

CHF 3 900 m

Ordinary fiscal balance  
Confederation (FS model)

Cantons 967

Communes -348

Public authorities 5 406



29.5%

Confederation  
debt rate,  
as % of the GDP



CHF 68 930 m

Confederation expenditure (FS model)

Social security 23 058

Finance and taxation 10 341

Transport and communications 8 945

Education 8 945

General administration 6 033

Public order and security, defence 6 010

National economy 5 749

Environmental protection and regional planning 1 017

Culture, sport and recreation, church 528

Health 367



CHF 3 232 780 m

Value added tax  
(2016, all economic sectors)

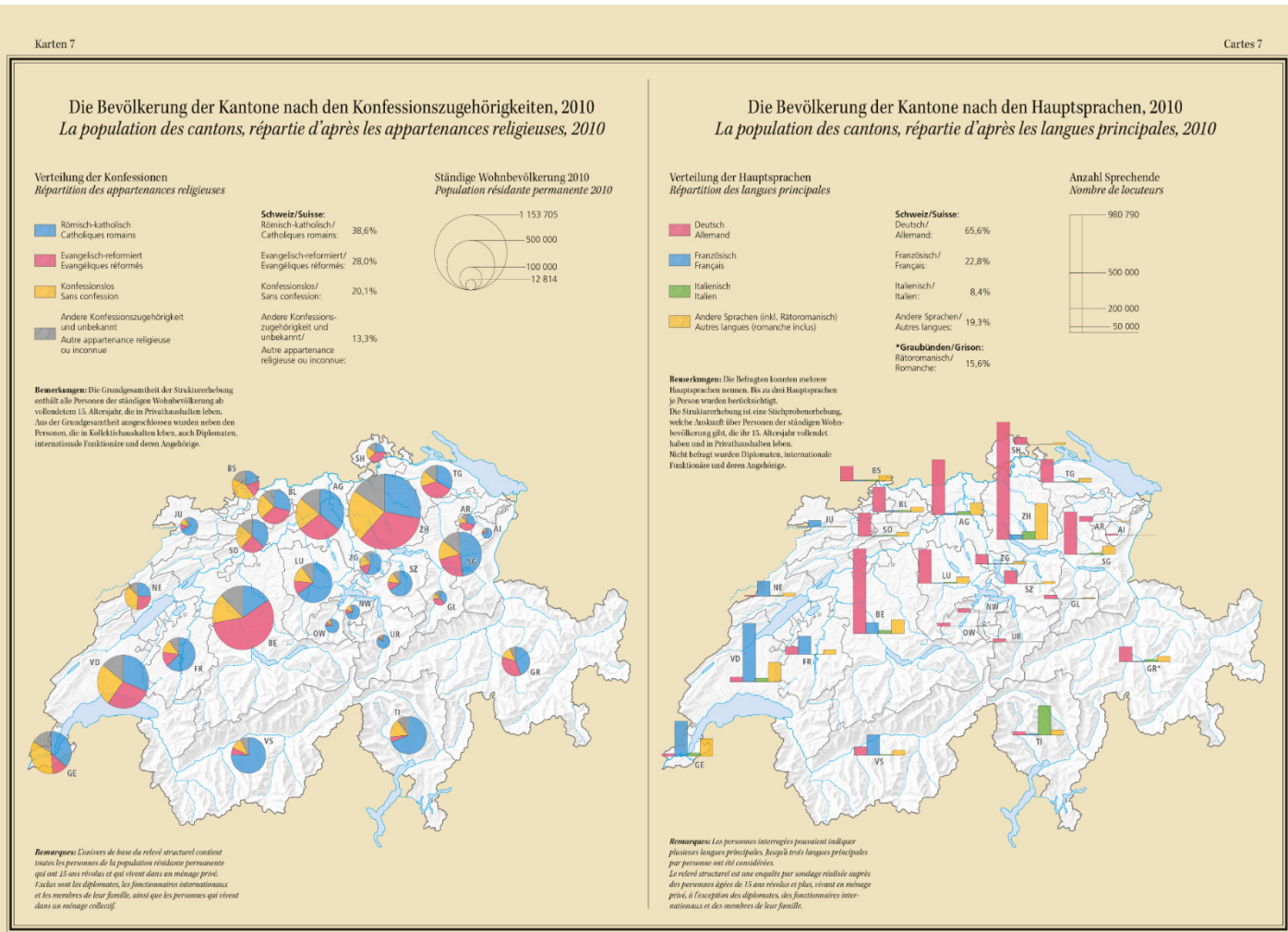
Sources: FGO - Federal Finance Administration

www.statistics.admin.ch

© FSO 2019

# Infographics

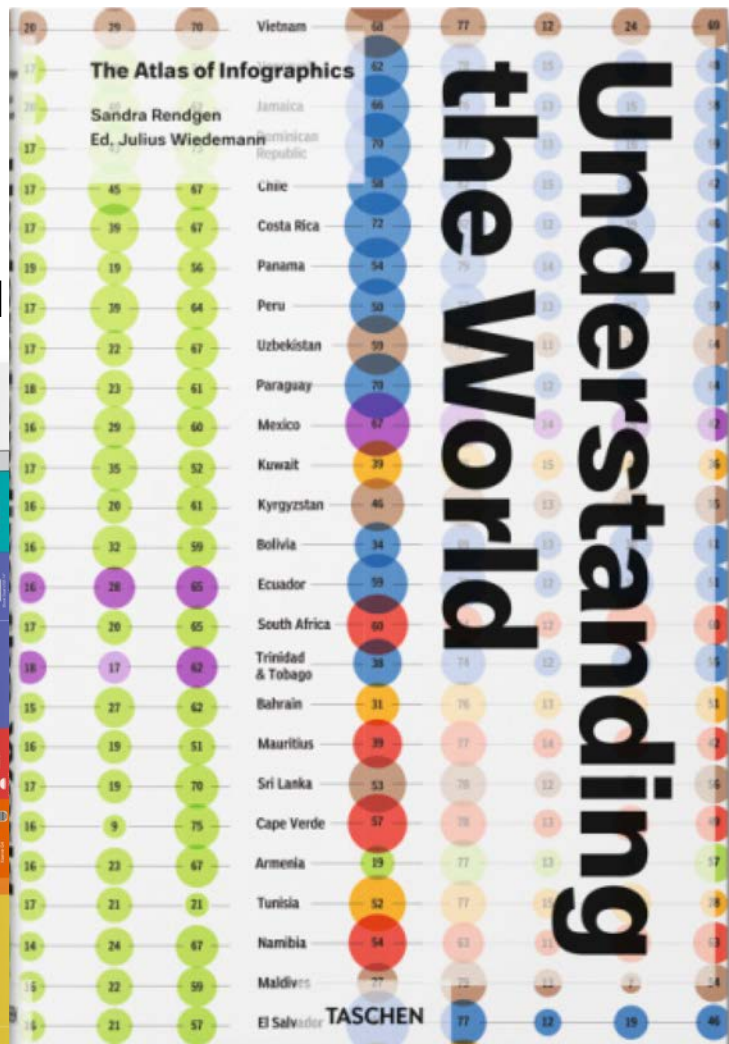
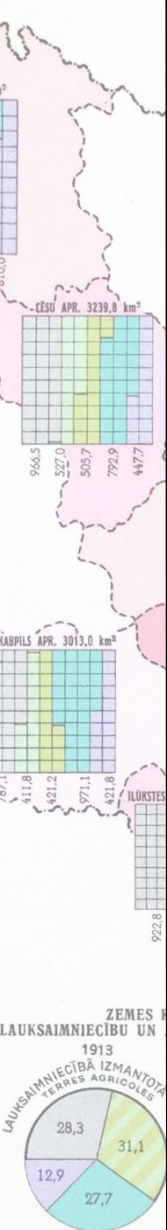
## The relationship of infographics and atlases





# Infographics

The relationship of infographics and





**S.**

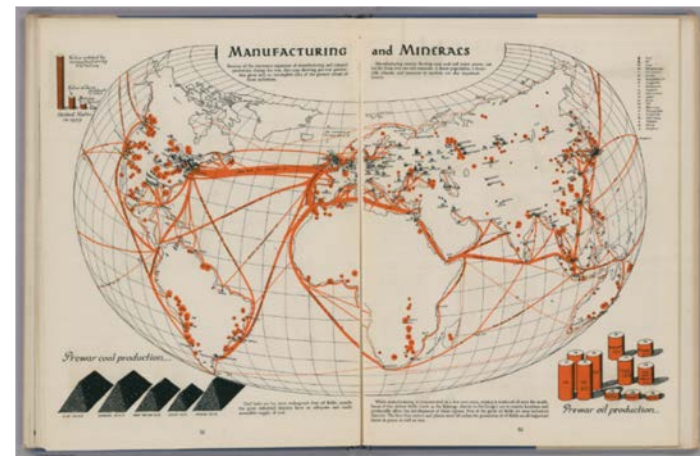
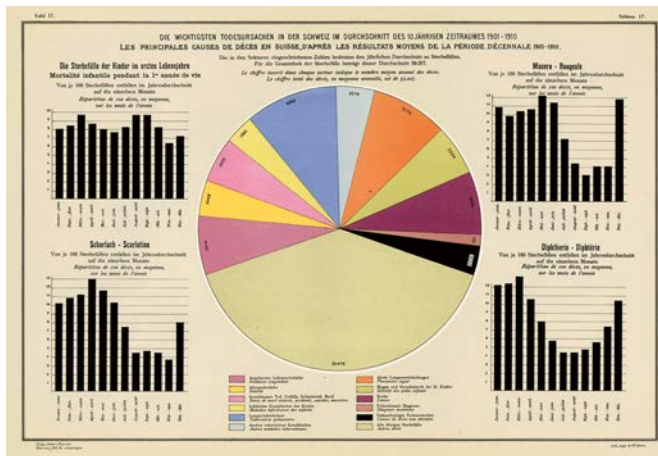




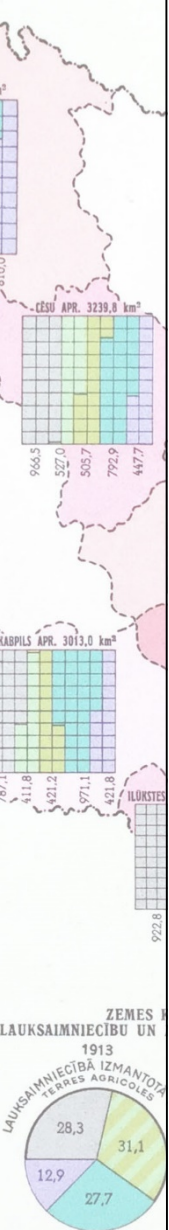
# Early infographics in Atlases

## First use of infographics as means of visual storytelling in atlases

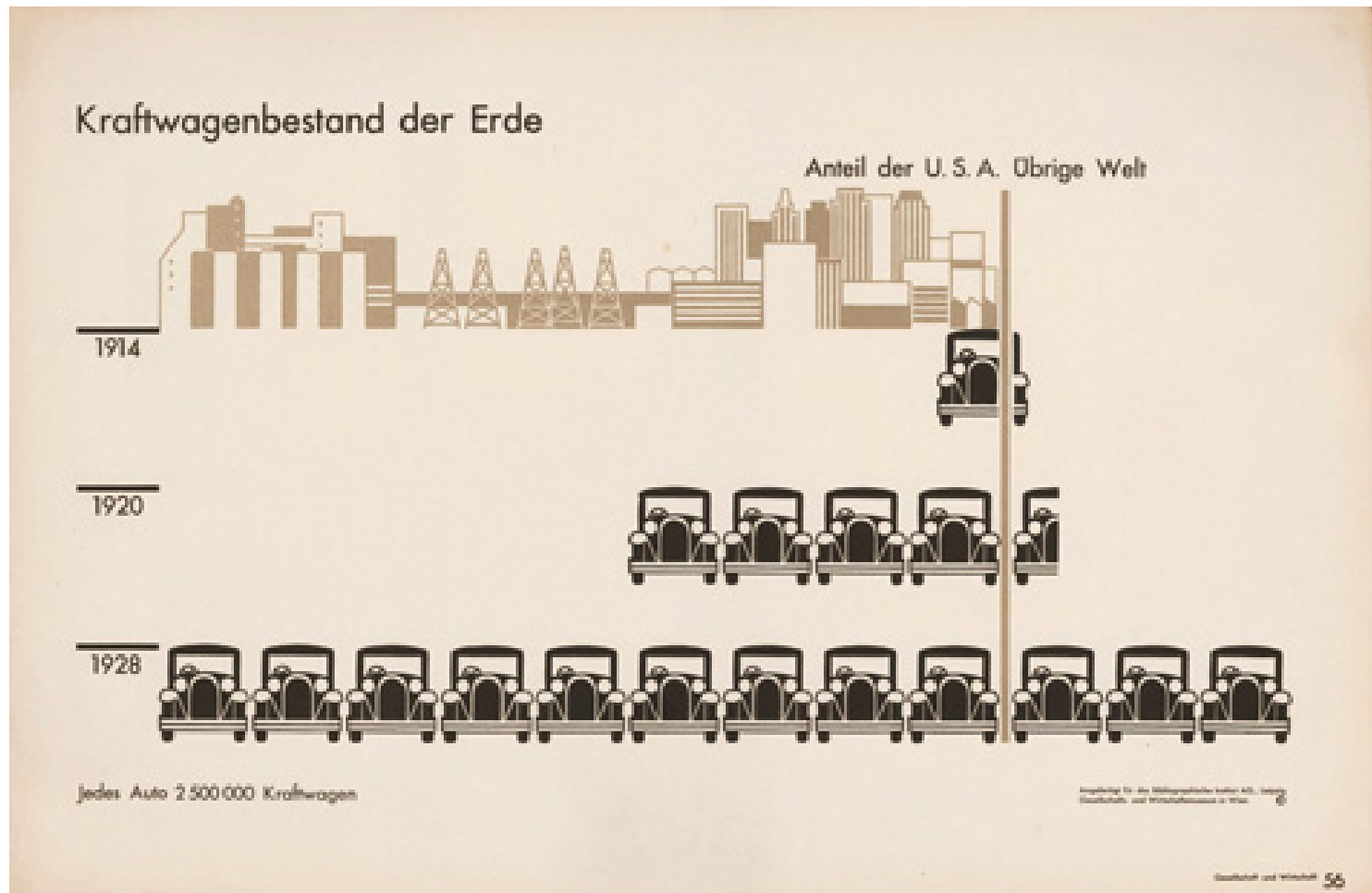
- 1875 – 1915: Rise of statistical atlases (as independent atlases)
- 1915 – 1945: Pictorial statistical atlases, Atlases of new nations



# Germany / Austria (O. Neurath, 1930)

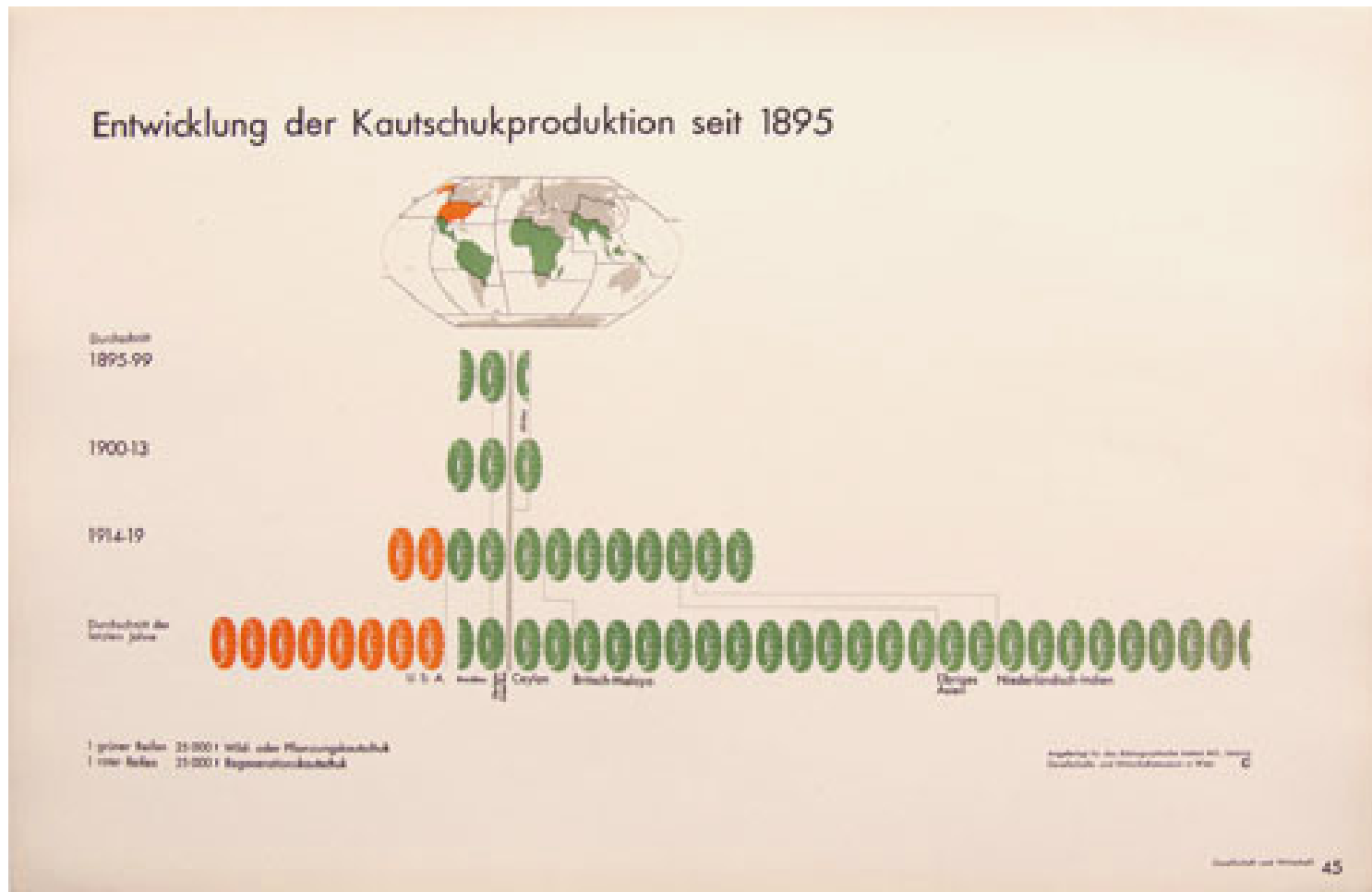


# Germany / Austria (O. Neurath, 1930)

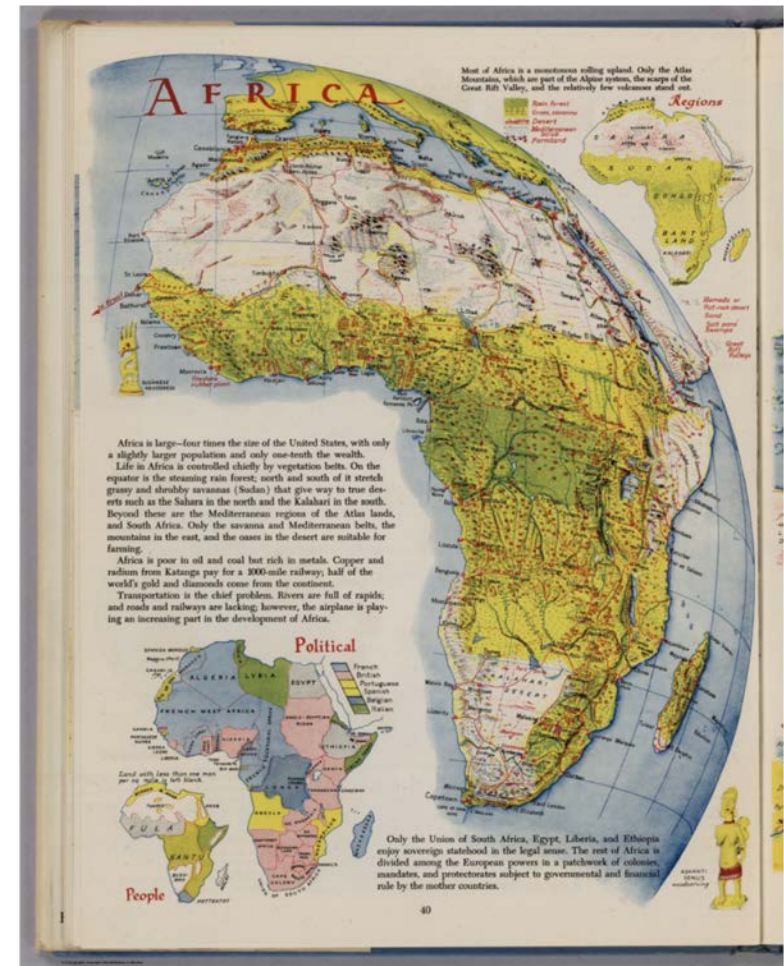
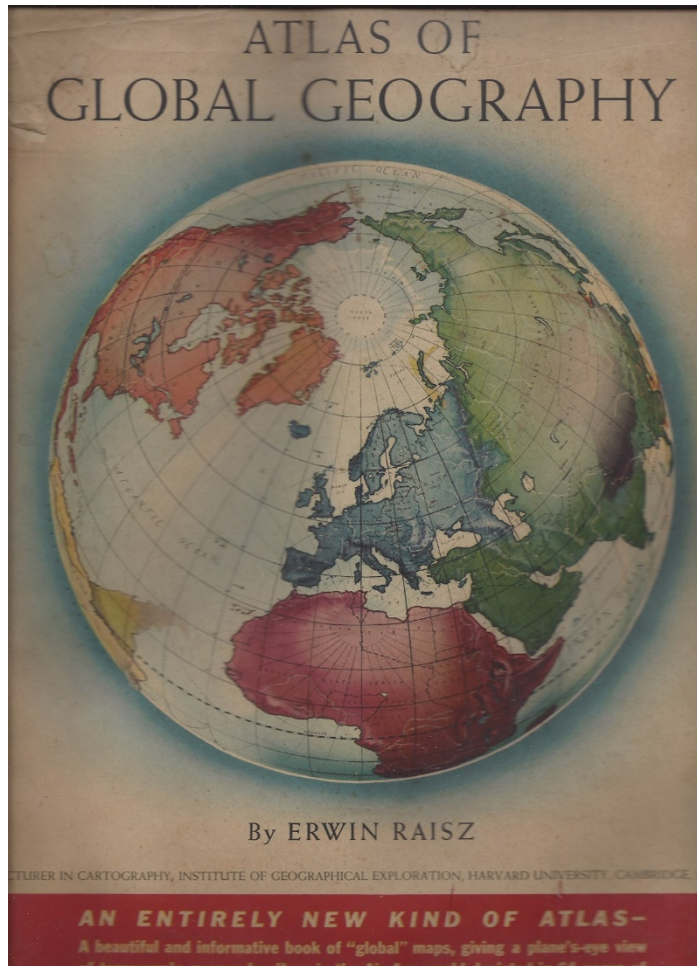




# Germany / Austria (O. Neurath, 1930)

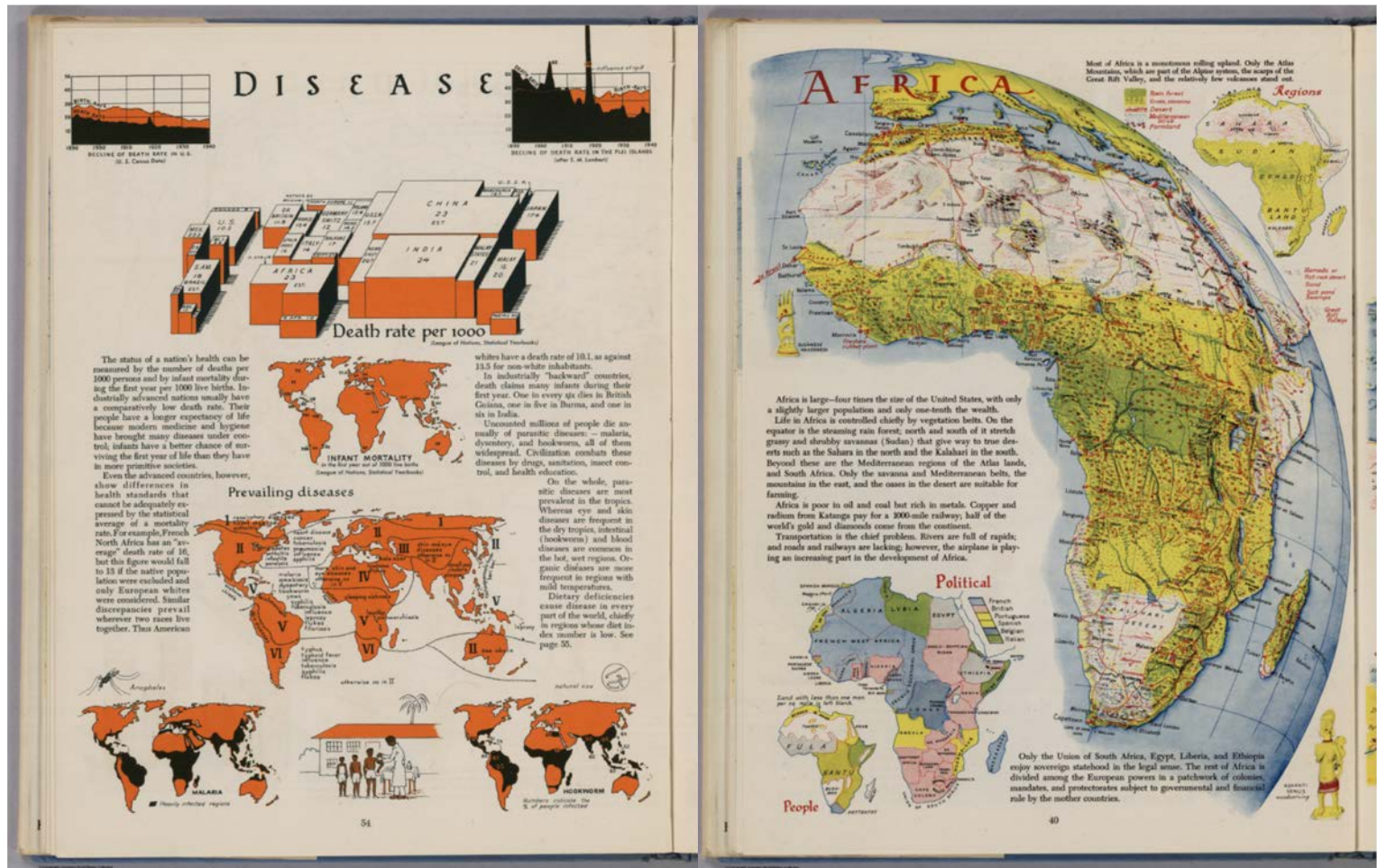


# Unites States / Hungary (E. Raisz, 1944)





# Unites States / Hungary (E. Raisz, 1944)



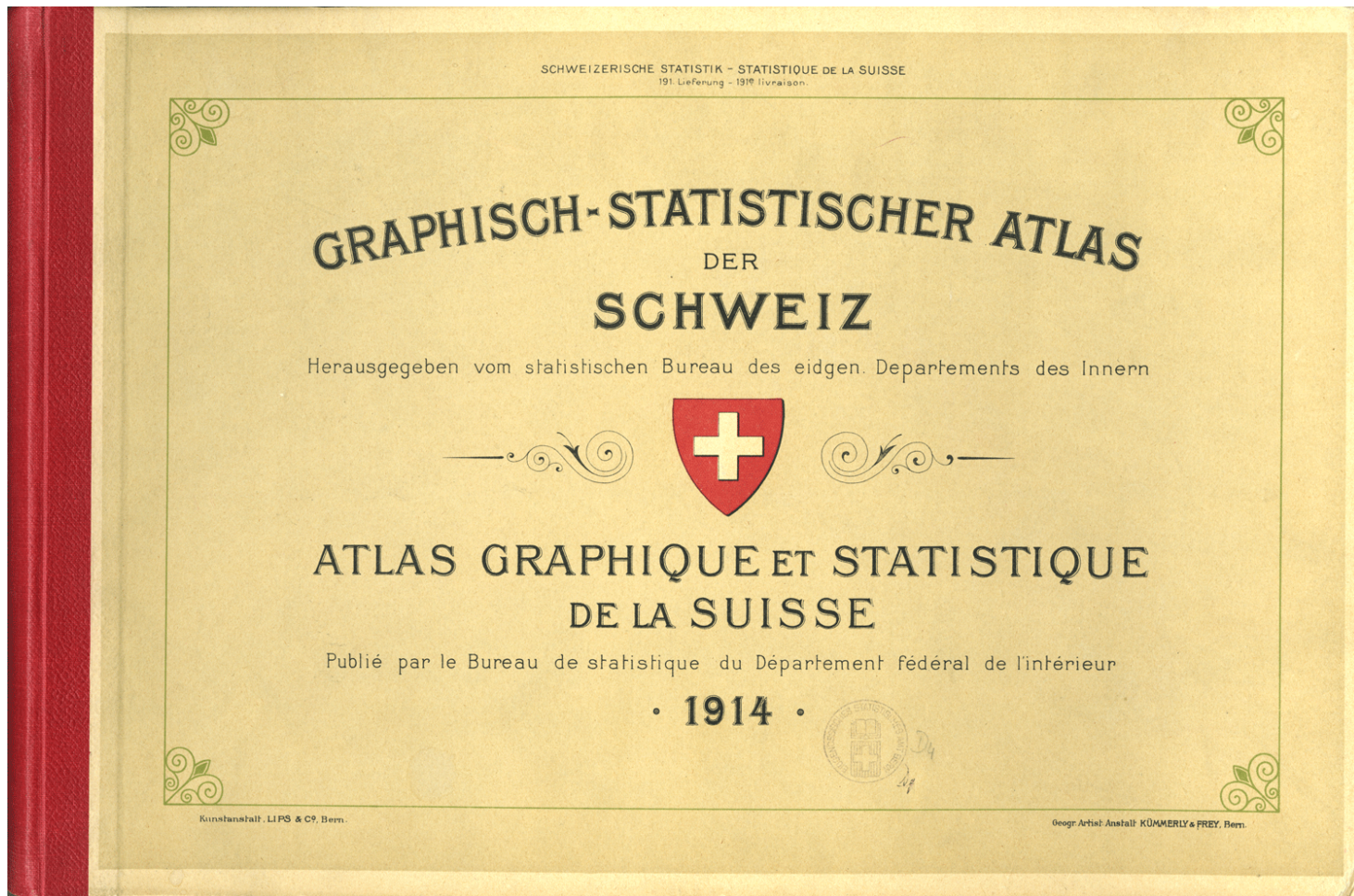


# Unites States / Hungary (E. Raisz, 1944)





# Switzerland (FSO, 1897 / 1914)





County	Area (km²)
Rīga	966,5
Kurzeme	527,0
Zemgale	505,7
Vidzeme	772,9
Latgale	447,7

ZEMES LAUKSAIMNIECĪBU UN 1913.

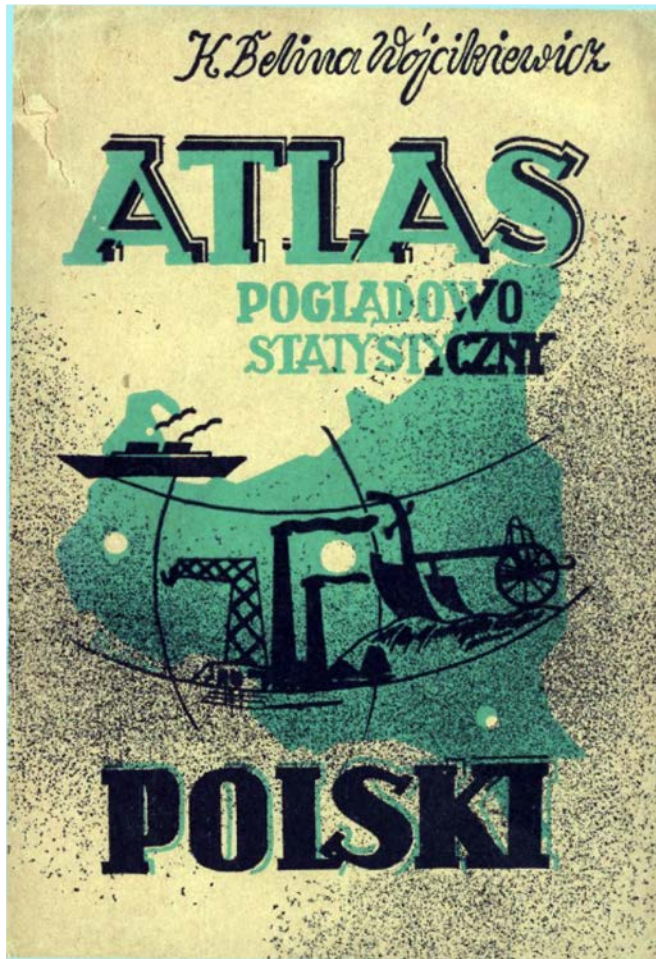
LAUKSAIMNIECĪBĀ IZMANTOTĀS TERRES AGRICOLICAL

28,3 31,1 27,7 12,9

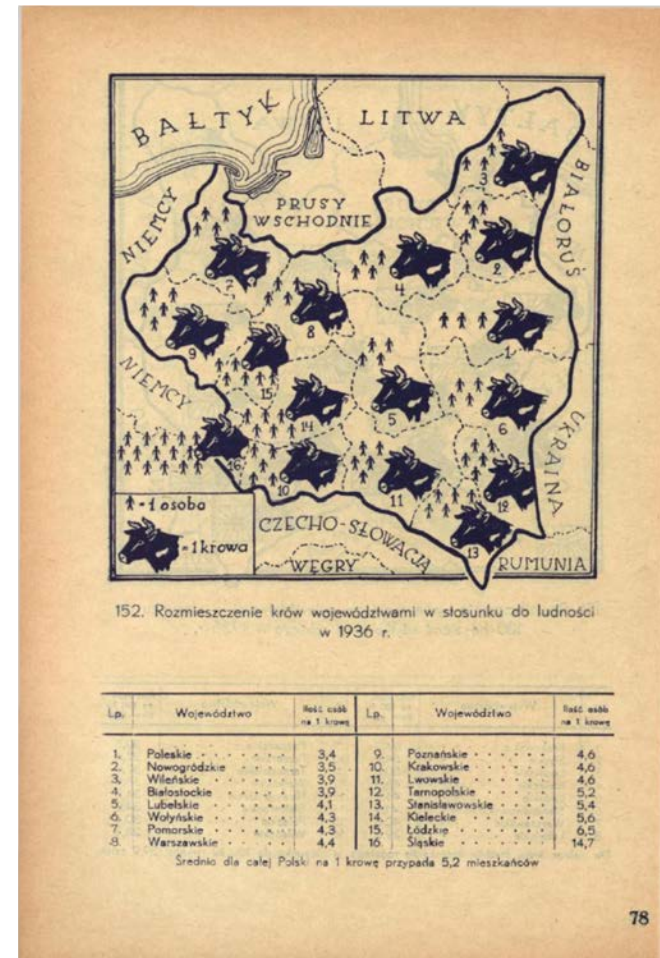
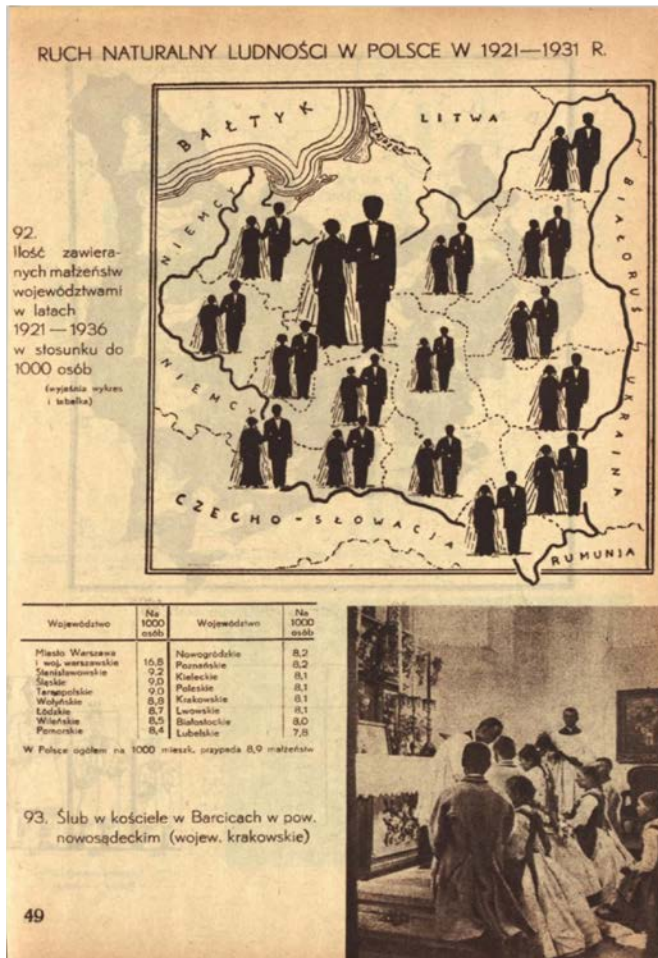




# Poland (K. B. Wójcikiewicz, 1938)



# Poland (K. B. Wójcikiewicz, 1938)



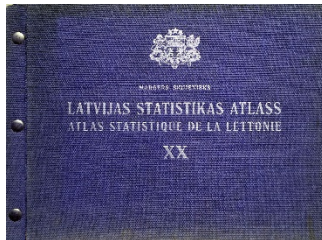


# Baltic States (1918–1938)



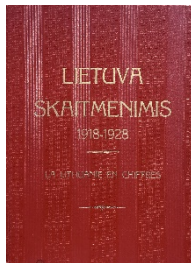
## Eesti – Statistiline Album Estonie – Album statistique

**1925/28**, Tallinn, 240 p., V. Schmidt / K. Seadnud  
Riigi Statistika Keskbüroo



## Latvijas Statistikas Atlāss Atlas statistique de la Lettonie

**1938**, Riga, 206 p., *Margers Skujenieks*  
Valsts Statistika Parvalde



## Lietuva Skaitmenimis 1918–1928 La Lithuanie en chiffres 1918–1928

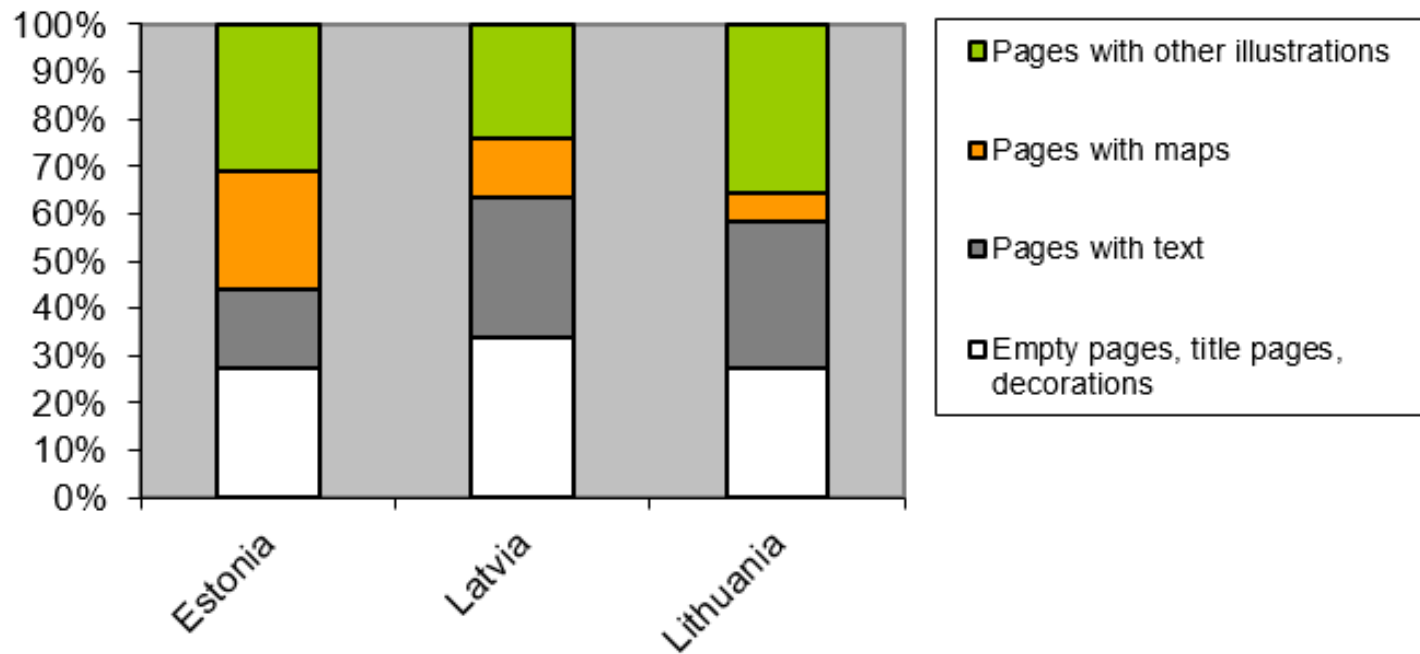
**1929**, Kaunas, 190 p.,  
Centralinis Statistikos Biuras



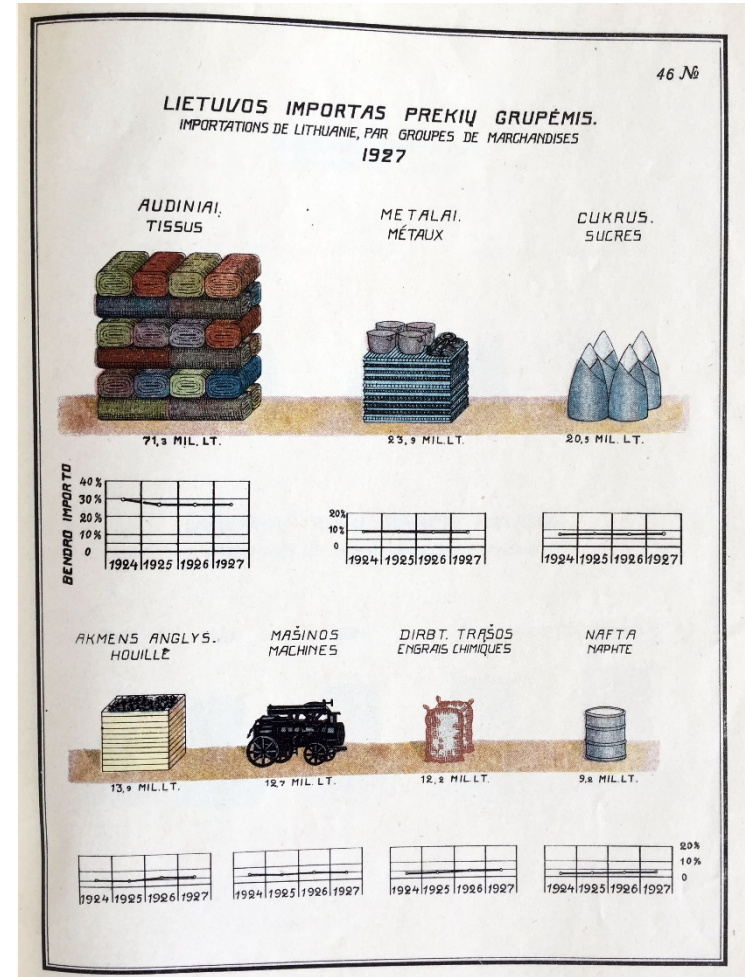
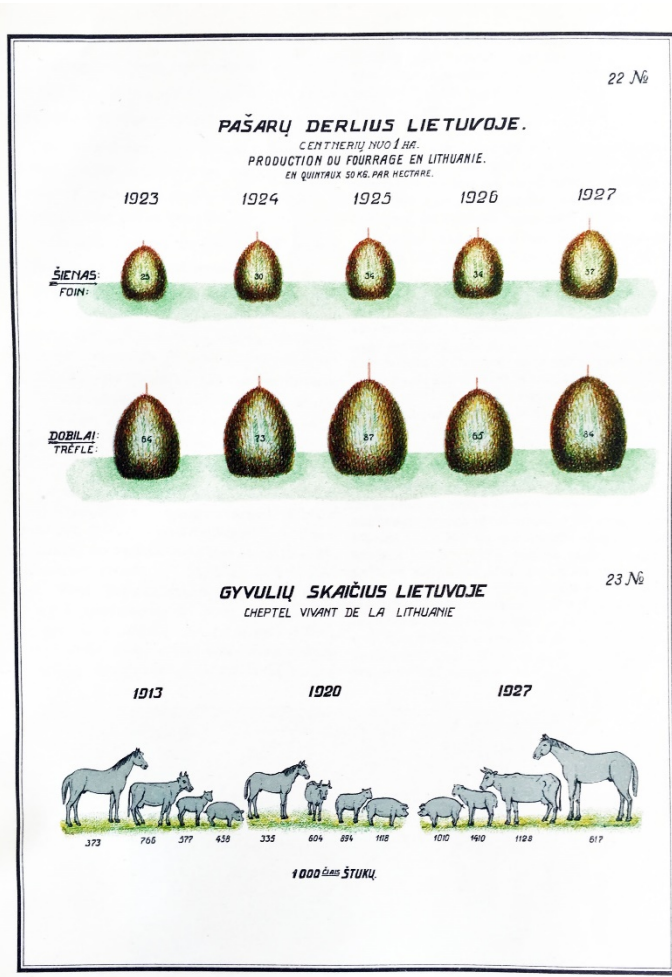


# Information modules

Information modules in all three atlases



# Lithuania (1929)





# KIAUŠINIŲ EKSPORTAS.

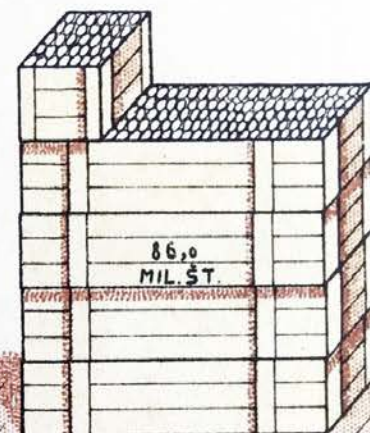
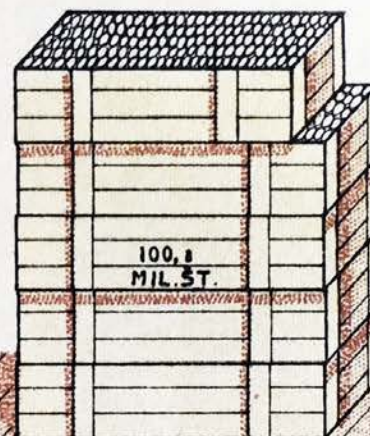
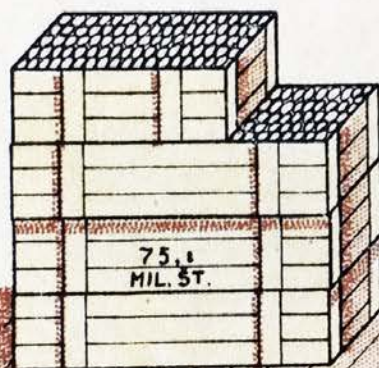
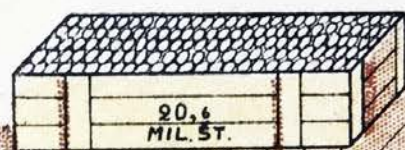
## EXPORTATIONS DES OEUFS

1920

1921

1922

1923



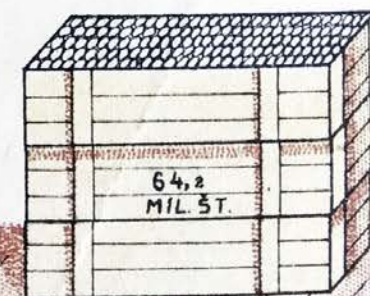
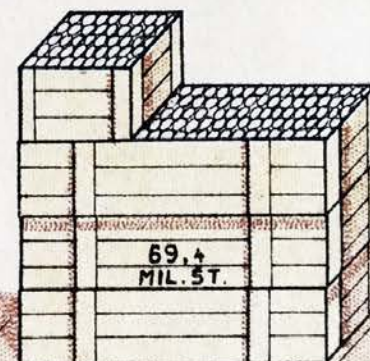
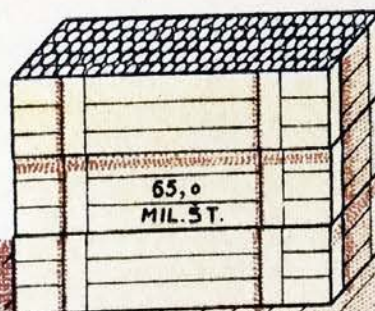
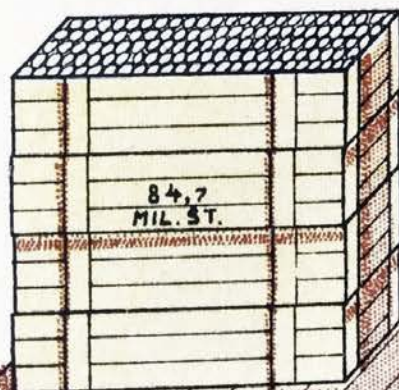
1924

1925

1926

15,1 MIL. LT.

1927



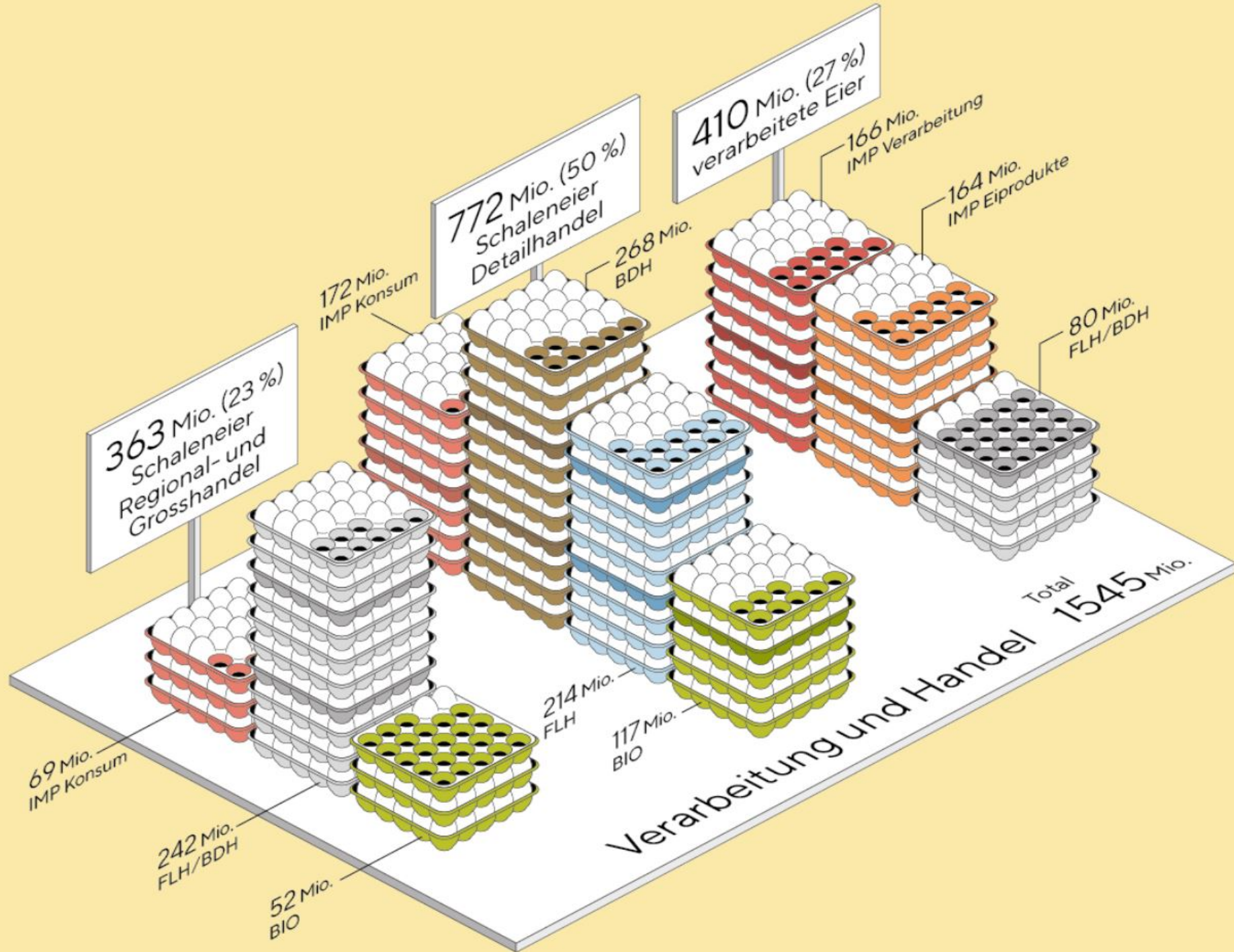
19,9 MIL. LT.

14,9 MIL. LT.

13,6 MIL. LT.

10,9 MIL. LT.

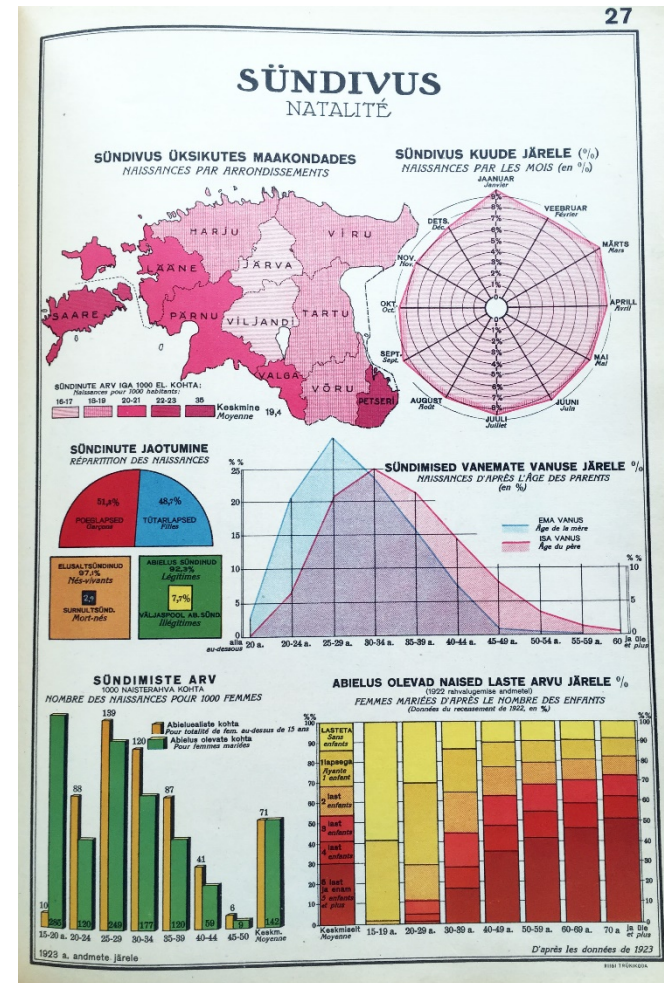
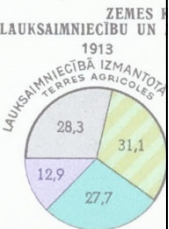




**ZEMES P  
LAUKSAIMNIECIBU UN  
1913**

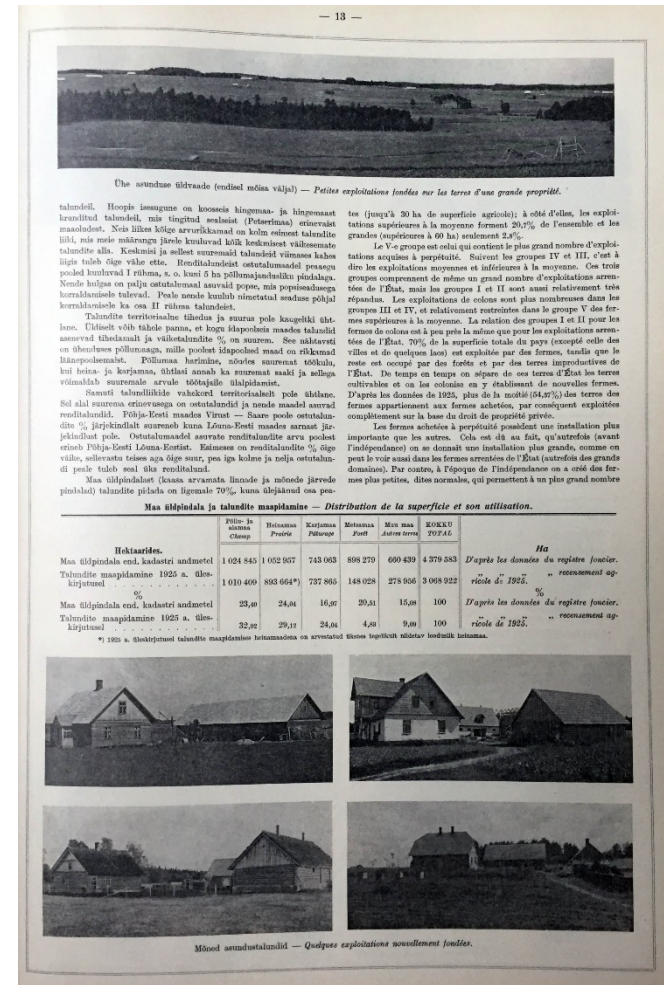
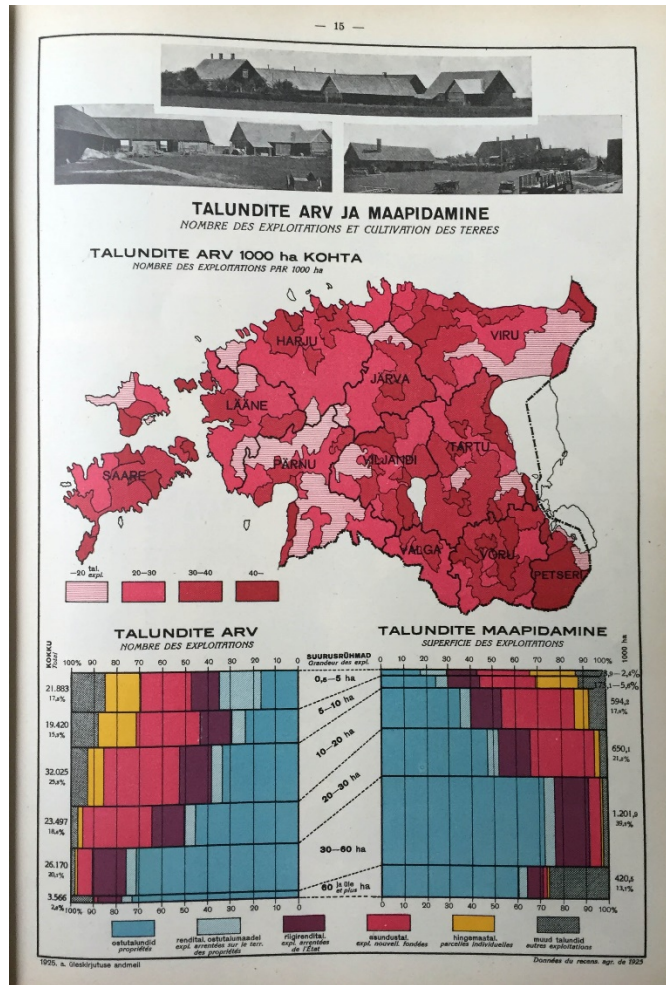
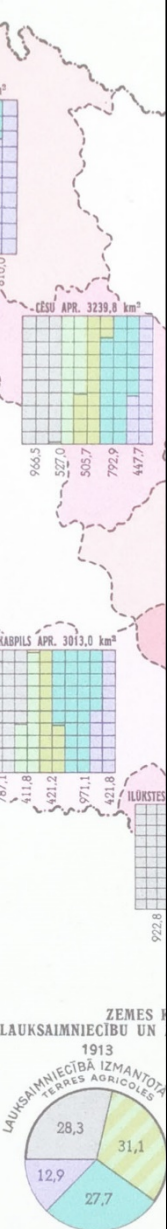
**LAUKSAIMNIECIBĀ IZMANTOTĀ  
TERRES AGRICOLES**

Terres Agricoles	Percentage
Grey	28,3
Green	31,1
Blue	27,7
Purple	12,9





# Estonia (1925/28)



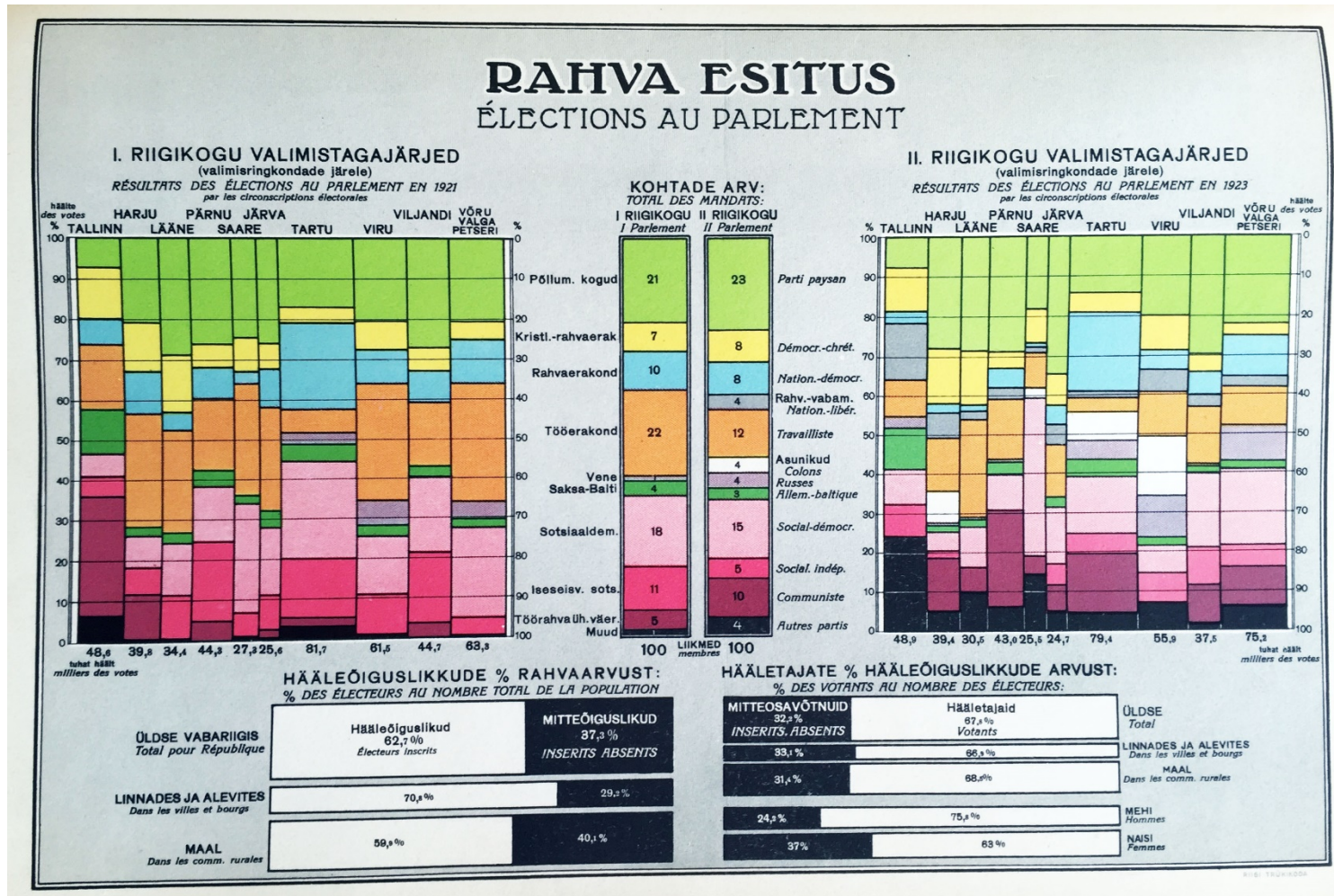


# Estonia (1925/28)



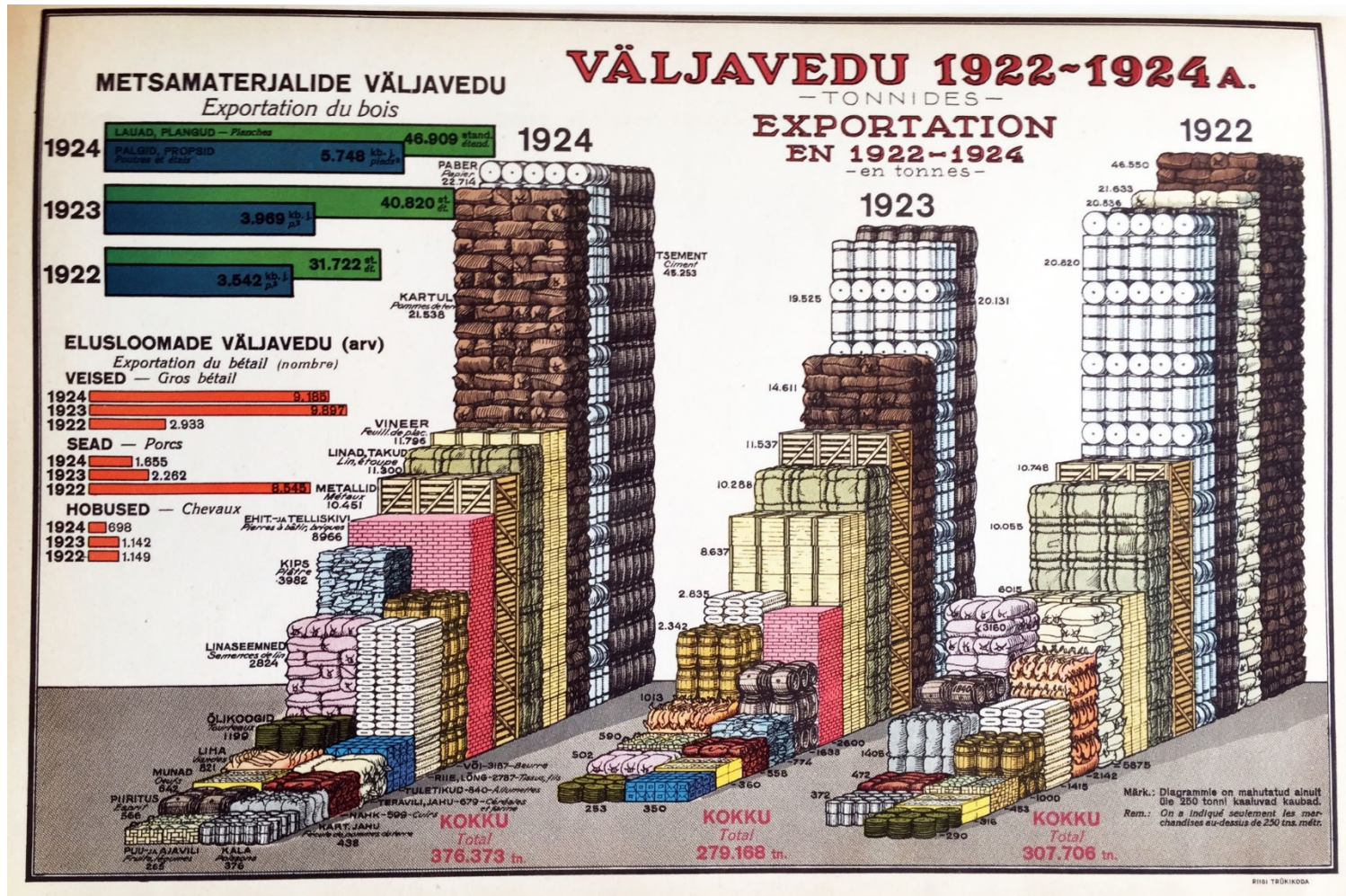


# Estonia (1925/28)



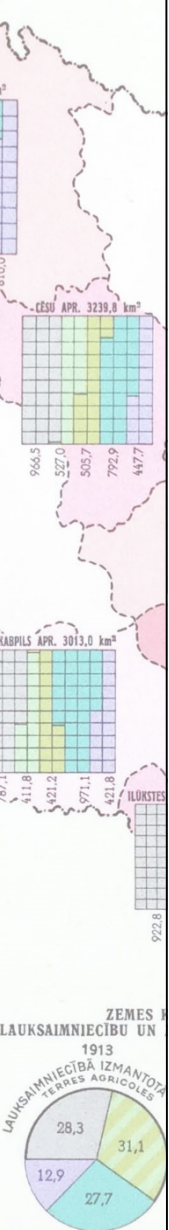
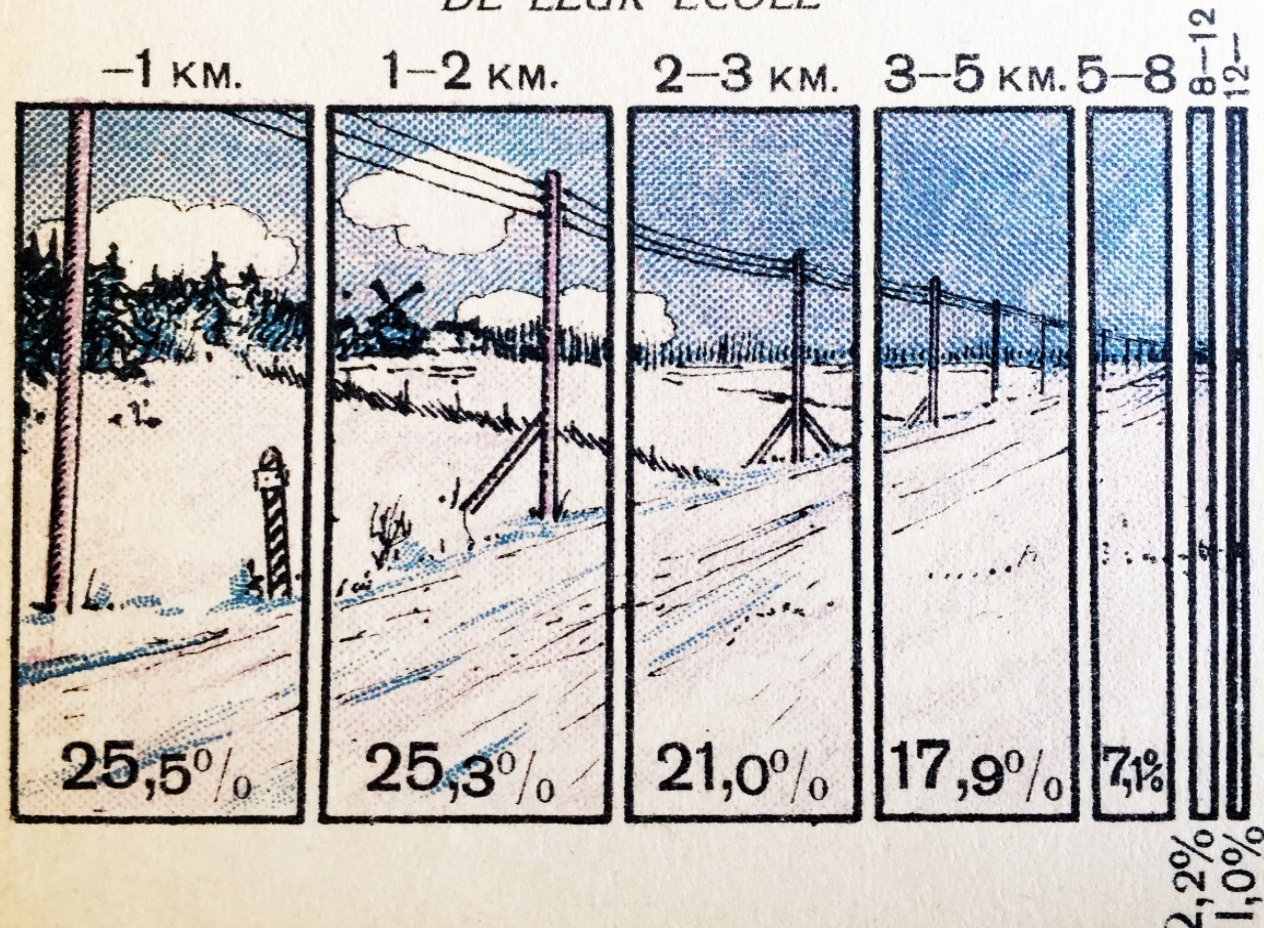


# Estonia (1925/28)





# ALGKOOLI ŪPILASTE KOOLISKÄIMISE KAUGUS ÉLOIGNEMENT DU DOMICILE DES ÉLÈVES DE LEUR ÉCOLE





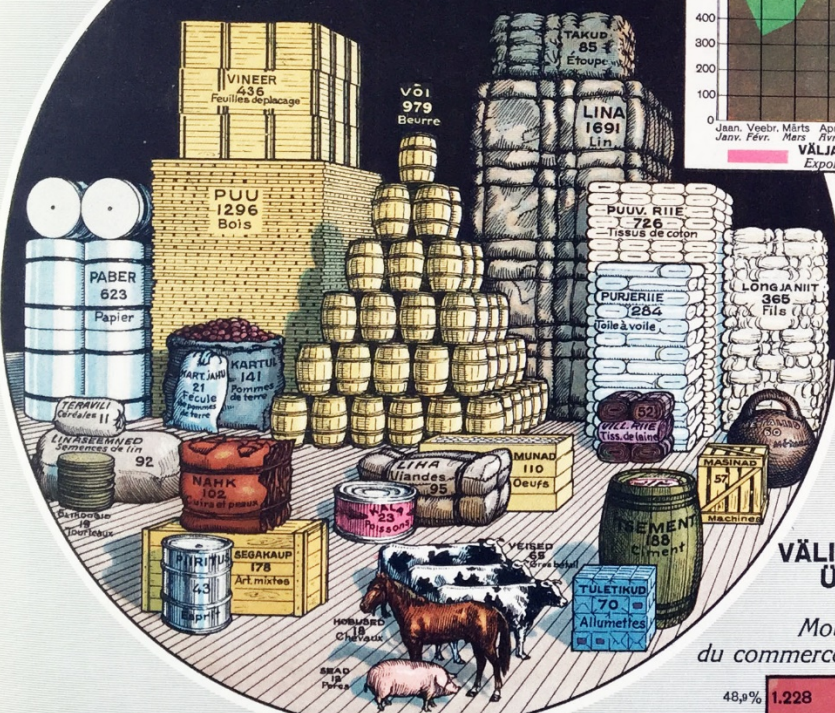
VÄLISKÅUBANDUS  
1924A.

—MILJONITES MARKADES—

## COMMERCE EXTÉRIEUR EN 1924

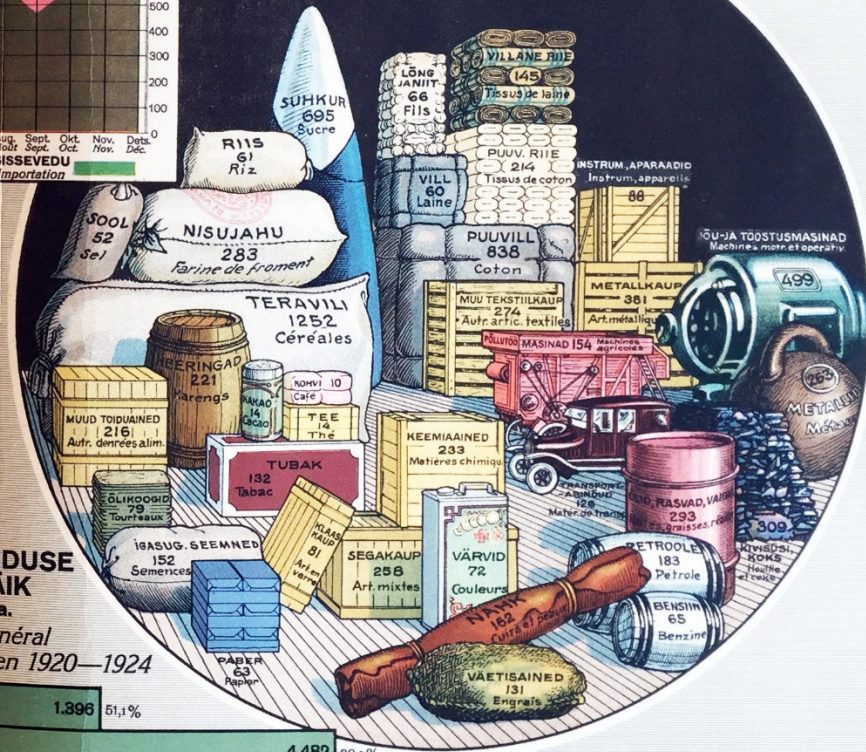
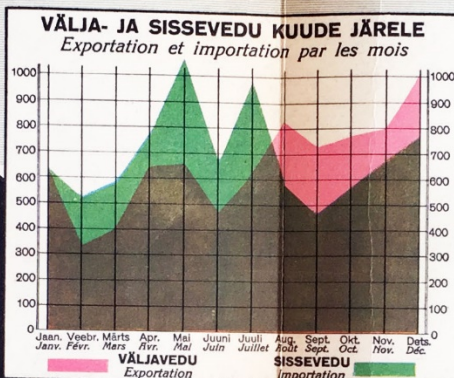
**VÄLJAVEDU**  
**EXPORTATION**

KOKKU  
7.866  
TOTAL



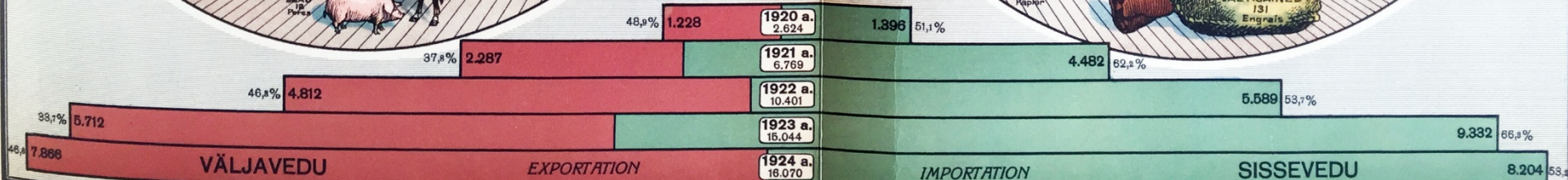
**SISSEVEDU**  
IMPORTATION  
KOKKIL

KOKKU  
8.204  
TOTAL



# VÄLISKAUBANDUSE ÜLDLÄBIKÄIK 1920—1924 a.

*Mouvement général  
du commerce extérieur en 1920—1924*





# Thank you for your attention!

[thomas.schulz@bfs.admin.ch](mailto:thomas.schulz@bfs.admin.ch)

