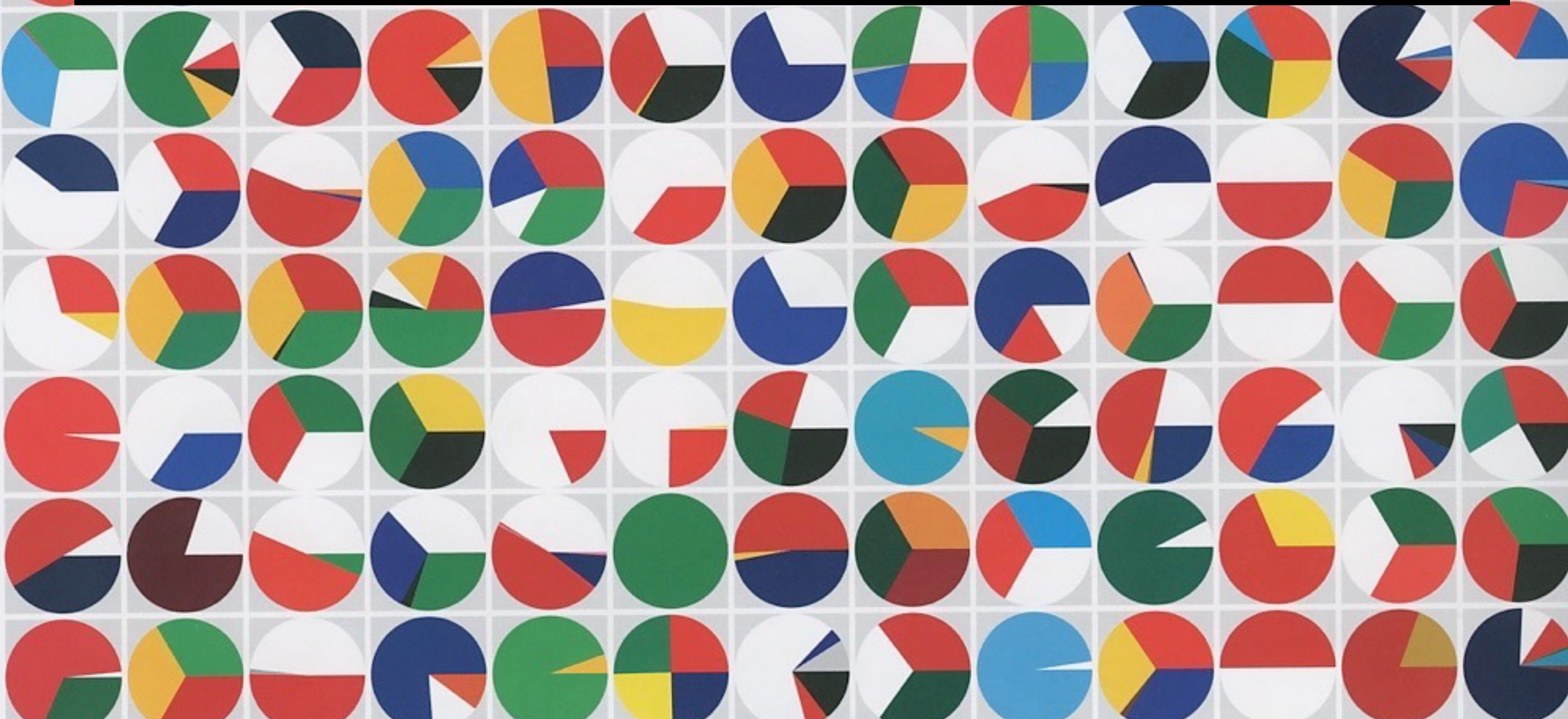


introduction to information design



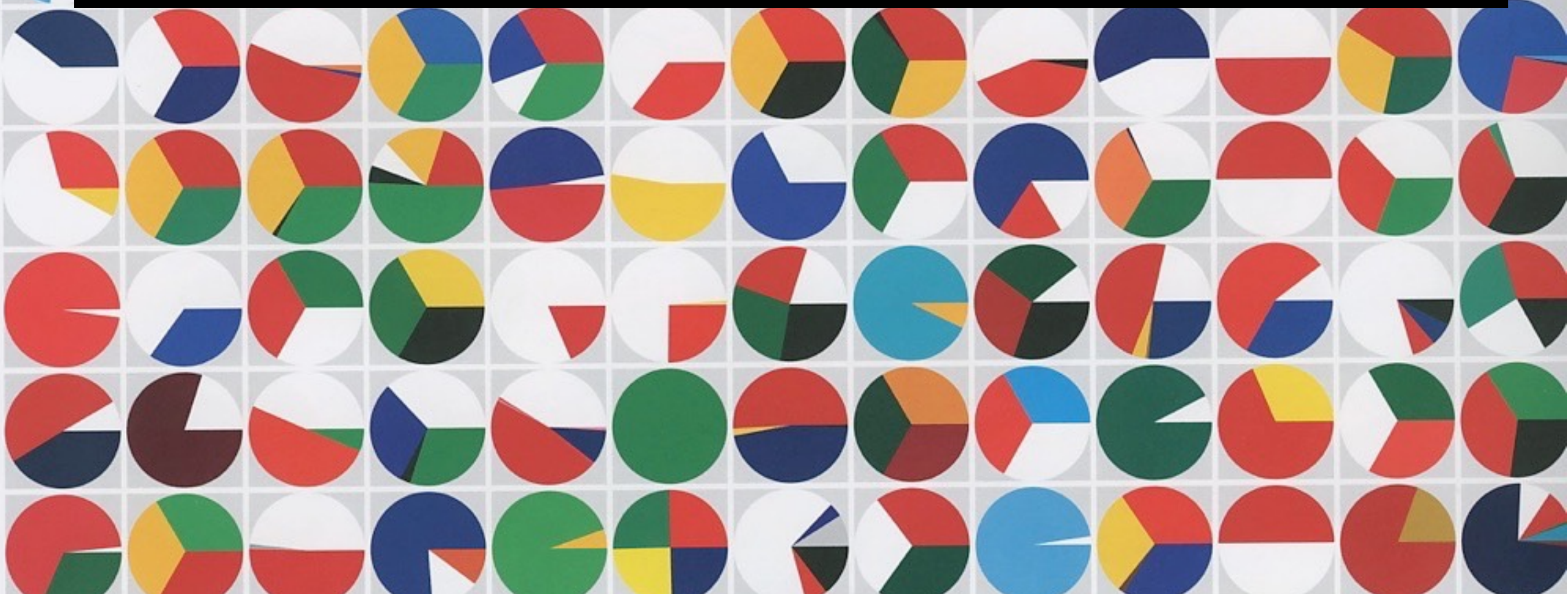
what is design?

**what makes design to
be a good design?**



**aesthetics +
functionality +
quality/reliability =
design**

**αισθητική +
λειτουργικότητα +
ποιότητα/αξιοπιστία =
design**



● **aesthetics**

● **functionality**

● **quality/reliability**





● aesthetics

● functionality

● quality/reliability



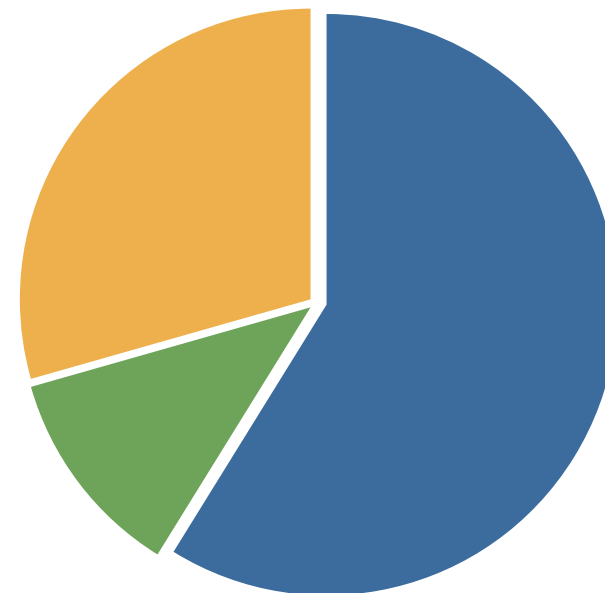
data?



● aesthetics

● functionality

● quality/reliability





swatch...

Do they make profit?

(yes)

Are they successful?

(yes)

Why?

because they know their target audience...and they know them well.

How do they know their audience so well?

Because they know how to collect and analyse data!

information design

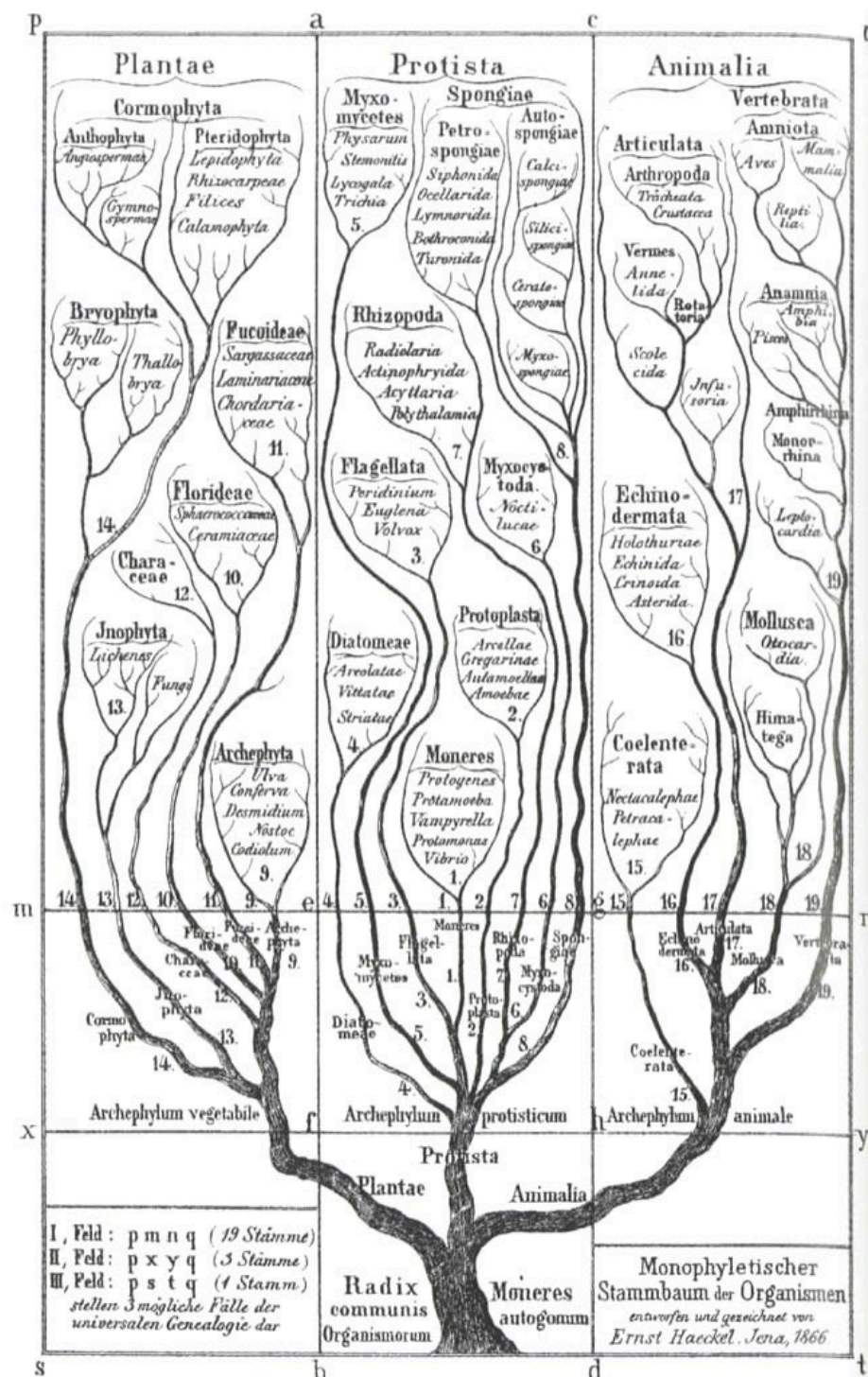
τάξη_δομή_κατηγοριοποίηση



hierarchical structures

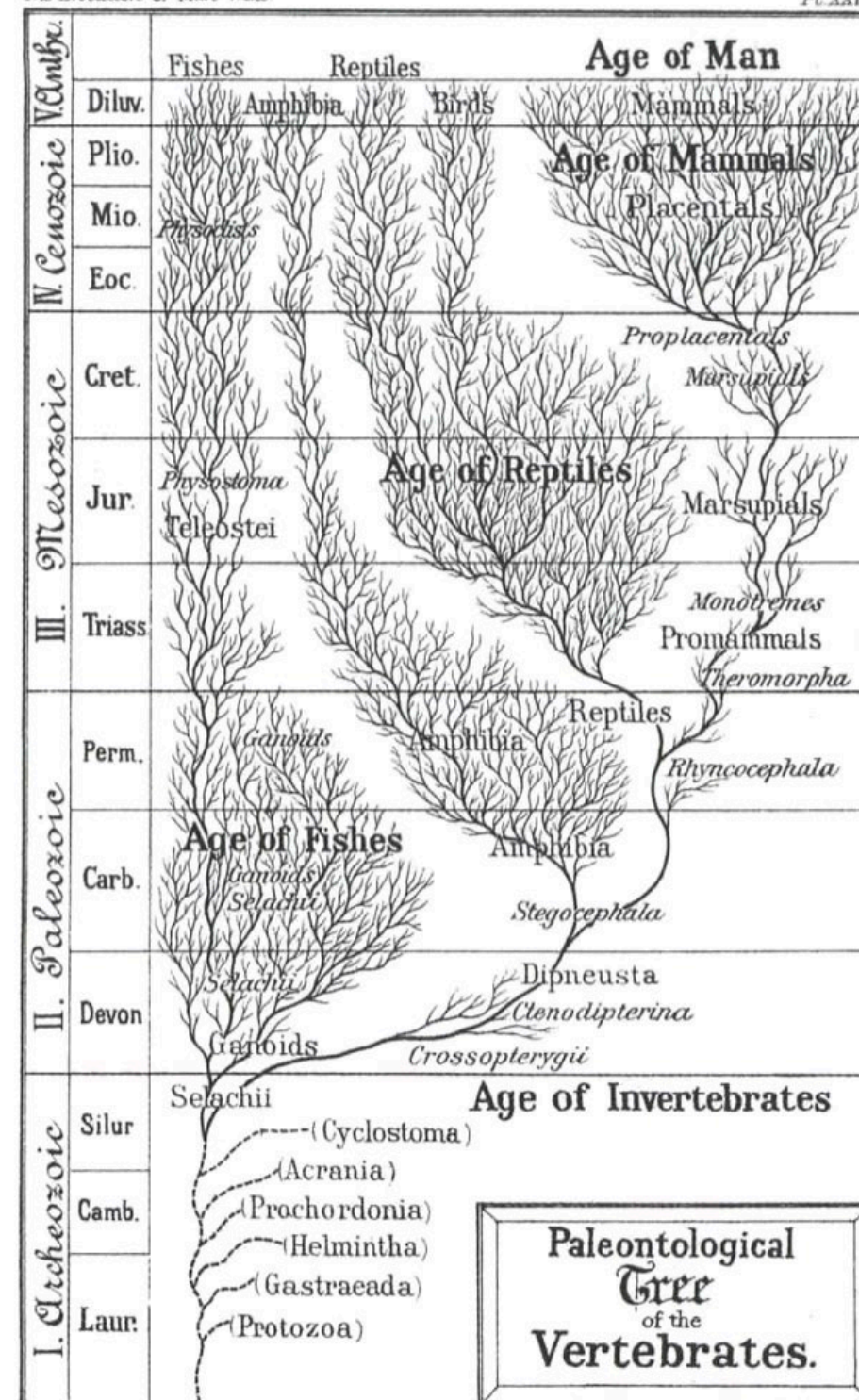
+

historical references



Ernst Haeckel: "Monophyletic Family Tree of Organisms" in the first edition of *Generelle Morphologie der Organismen (General Morphology of Organisms)*, 1866.

This branching diagram is considered the earliest one published by Haeckel.²¹ It shows the three kingdoms of life: unicellular organisms (*Protista*) and multicellular organisms—animals (*Animalia*) and plants (*Plantae*).



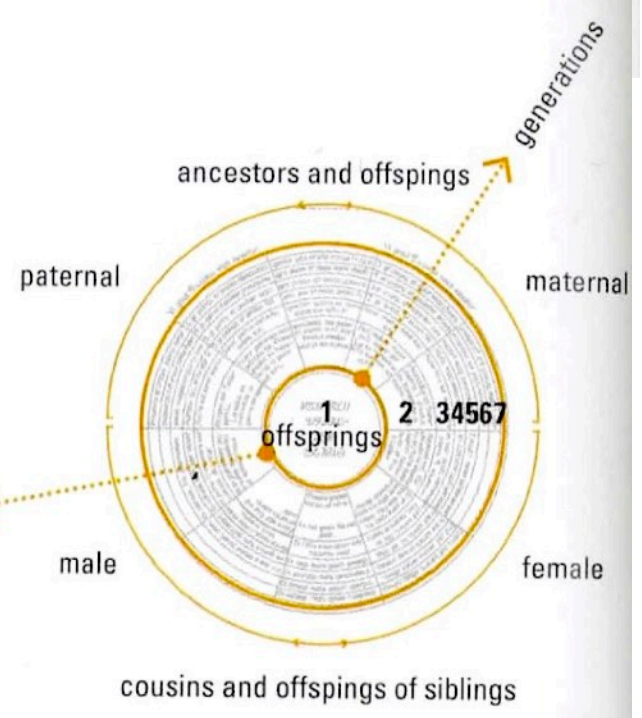
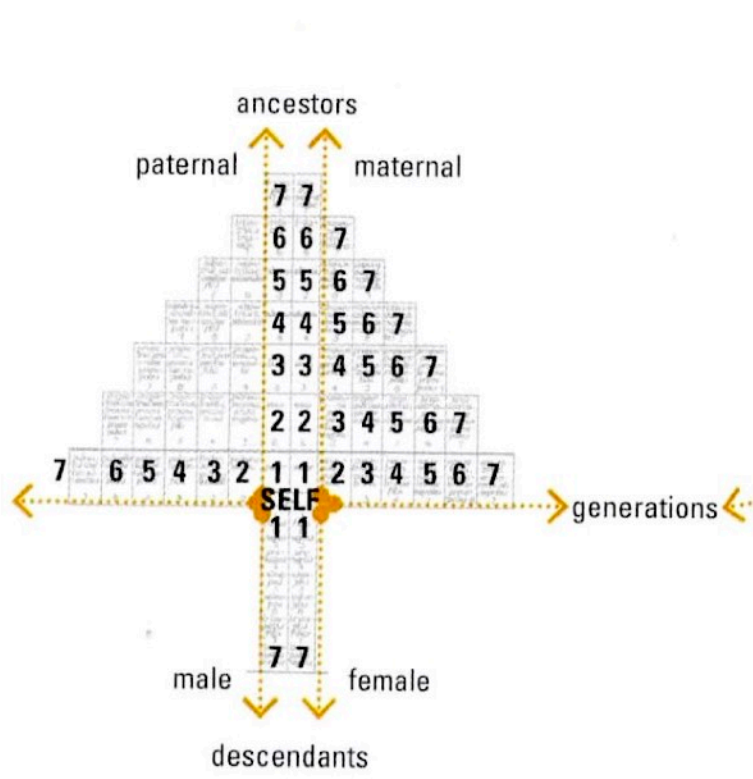
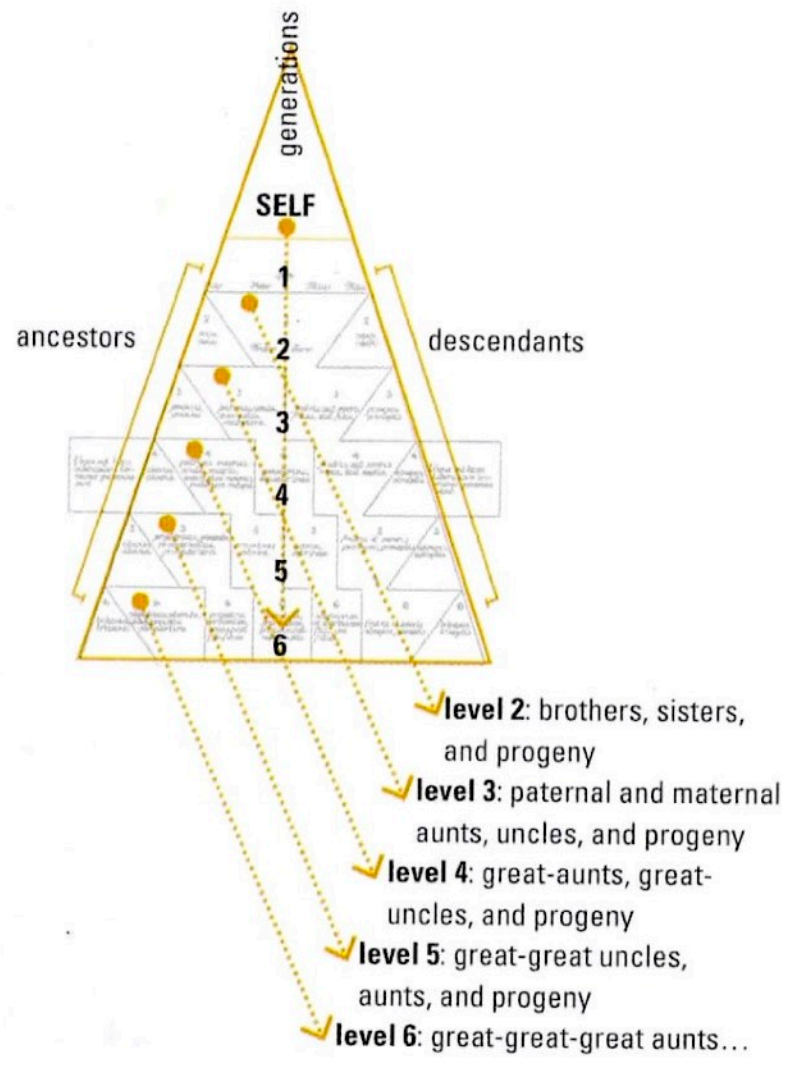
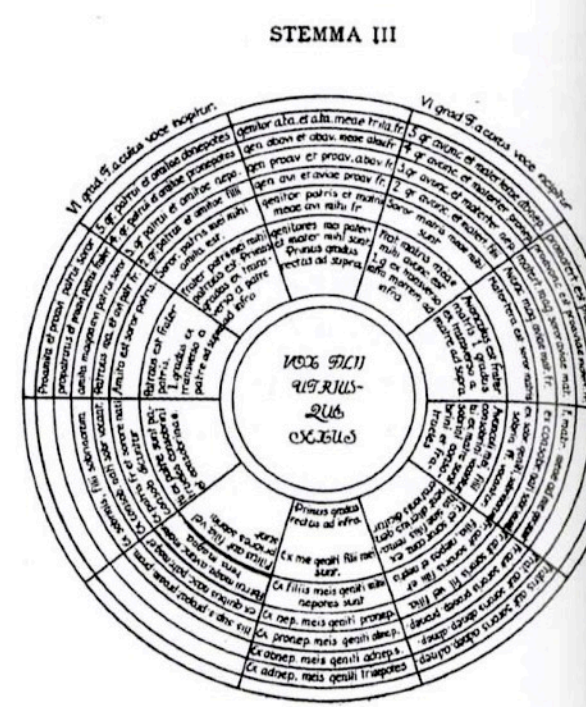
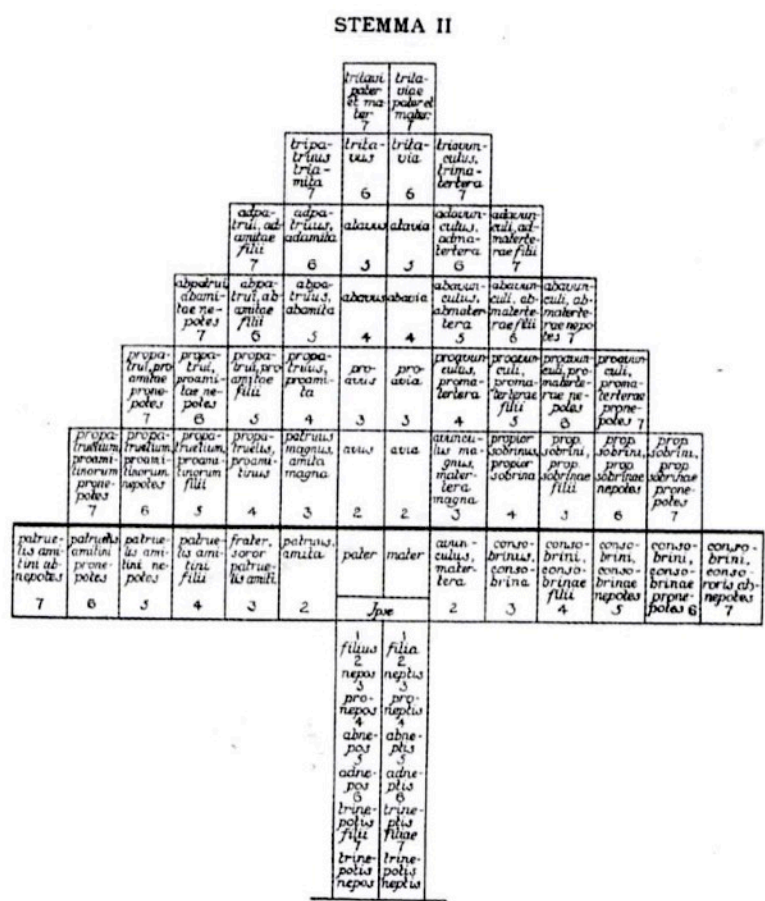
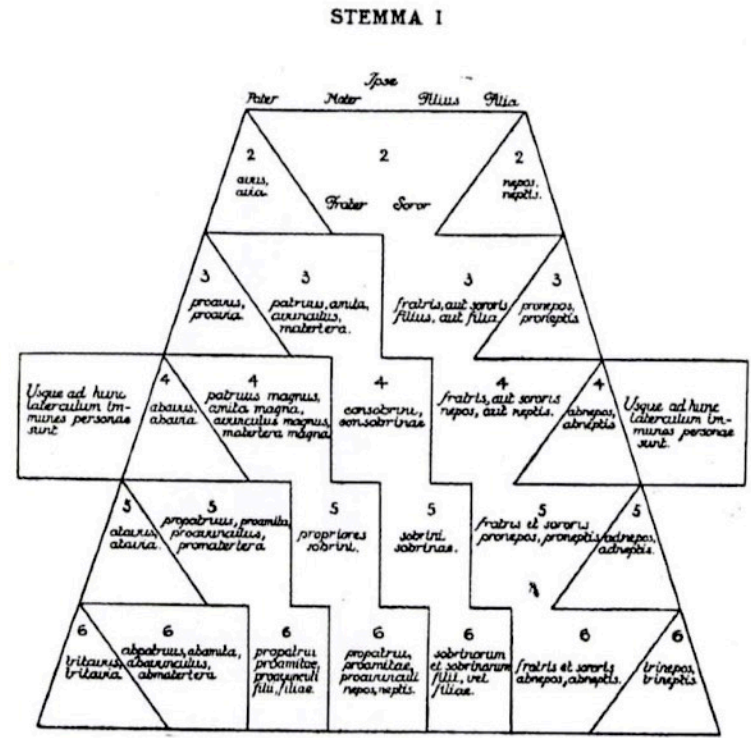
E. Haeckel del.

Ernst Haeckel: "Paleontological Tree of Vertebrates," c1879.

This diagram shows the evolutionary history of species.

hierarchical structures

genealogical trees



Bishop Isidore of Seville: "Consanguinity Trees," I, II, III, Seventh century.

what is information design?

it is a visual explanation that helps you more easily to understand, find or do something.

it is universally understandable

it stands alone and is completely self-explanatory

it reveals information that was formerly hidden or submerged

it's visual, and when necessary, integrates words and pictures in a fluid, dynamic way.

είναι μια οπτική επεξήγηση που μας βοηθά πιο εύκολα να κατανοήσουμε, να εντοπίσουμε ή απλά να κάνουμε κάτι.

είναι κατανοητό για όλους

είναι αυτόνομο και εντελώς αυτονόητο

αποκαλύπτει πληροφορίες που προηγουμένως ήταν κρυμμένες ή δεν ήταν "ορατές"

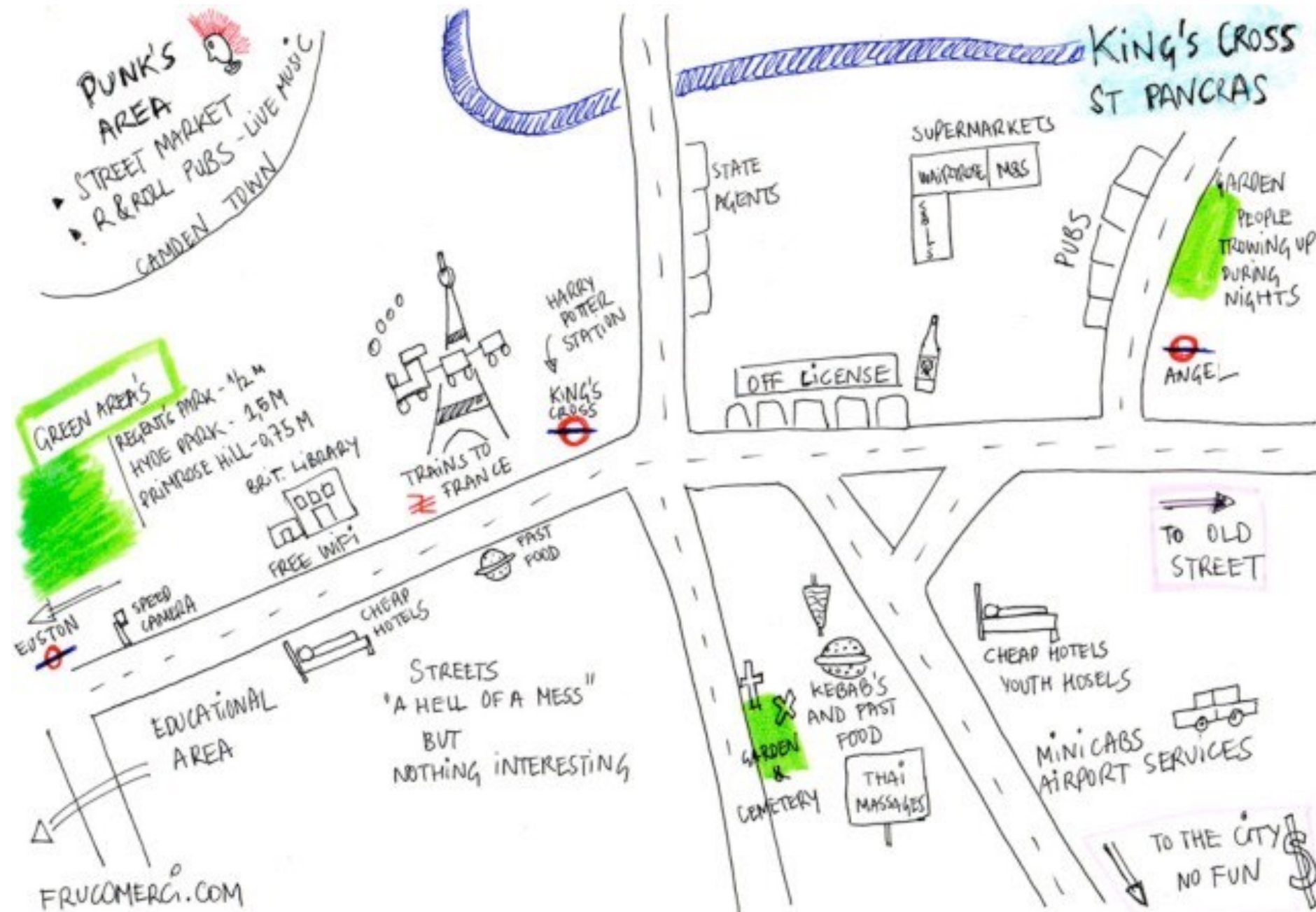
είναι μια οπτική γλώσσα, και όταν είναι απαραίτητο, ενσωματώνει λέξεις και εικόνες με ένα ρευστό, δυναμικό τρόπο.

**categories of info
design**

**+
historical highlights**

Χαρτογράφηση και τοπογράφηση (mapping and spacial structures)

Αναπαράσταση τόπου και χώρου



topographic maps

TOPOGRAPHIC MAPS

Psalter World Map, 1265:
Considered one of the
great medieval world
maps.



Probably a copy of the map that
adorned King Henry III bed
chamber. Source: British Library

topography + iconography

Ebstorfer World Map (1300)







In 1551, Pirro Ligorio produced an engraving depicting a reconstruction of ancient Rome

cartography

cardography

The Fra Mauro map, one great medieval European map, was made by the Venetian monk Fra Mauro. (1450)



This is an 1804 copy of perhaps the first 'modern' world map, made by the Venetian monk Fra Mauro in about 1450. It points south because 15th-century compasses were south-pointing. It shows the Portuguese discoveries in Africa and questioned the authority of medieval and classical sources. Intended for display in Venice, it emphasizes the feats of Marco Polo. The British East India Company commissioned this copy, thus implying that Britain was heir to the Portuguese empire.





Johann Ruysch world map (1507-1508)



The great French cartographer Guillaume de L'Isle made the first version of this map in 1700. This 1745 version by Amsterdam map publisher Covens & Mortier

It also includes geography that had been discovered in the interim, such as the fact that Japan was an island and not attached to the mainland of Asia.

case study.
cartography + infographics

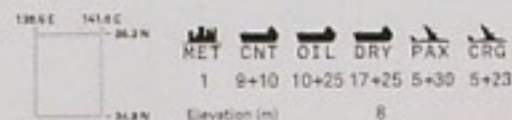
Joost Grootens

Metropolitan World Atlas (2005)



{video presentation}

Tokyo-Yokohama Japan



Population

Inhabitants 2000 **33,190,000**
demographia.com

Metropolitan development

Year	1985	2000
Total metropolitan inhabitants	21,017,000	33,190,000
Inhabitants in metropolitan core	8,893,000	8,130,000
Core share	42.3%	24.5%
Inhabitants in metropolitan periphery	12,124,000	25,060,000
Periphery share	57.7%	75.5%

demographia.com

Employment

	Mett. Area
Area (km ²)	5,258
Area share	100%
Employment	23,200,000
Employment share	100%
Employment density (employment/km ²)	4,393

demographia.com, 2000

Economy

Average income per capita (¥)	30,129
Gross regional product per capita (¥)	35,952
Unemployment rate	4.8%

demographia.com, 1998; asia-week.com, 2000

Health

Hospital beds per 100,000 inhabitants	12
Average life expectancy at birth	77

asia-week.com, 2000

Crime

Crimes per 100,000 inhabitants	2,240
--------------------------------	-------

asia-week.com, 2000

220

Metropolitan density

Inhabitants	33,190,000
Built-up area (km ²)	5,258
Population density (inhabitants/km ²)	6,312

demographia.com, 2000

Residential density

Year	1985
Inhabitants	25,434,000
Residential area (km ²)	2,819
Residential density (inhabitants/km ²)	9,022

demographia.com

Change in density (1970-1990)

Change in inhabitants	10,326,000
Change in area (km ²)	2,684
Change in density (inhabitants/km ²)	3,876

demographia.com

Traffic and transport

Public transport market share	49.0%
Private vehicle market share	51.0%
Average commuting time (minutes)	56

publicpurpose.com, 1990; asia-week.com, 2000

Road use

Average road speed (km/hour)	24.5
Vehicle density (vehicle km/km ²)	73,795

publicpurpose.com, 1990

Railway use

Passenger density (passenger km/km)	143,292
Rail vehicle density (vehicle km/km ²)	1,021,163

publicpurpose.com, 1990

Climate

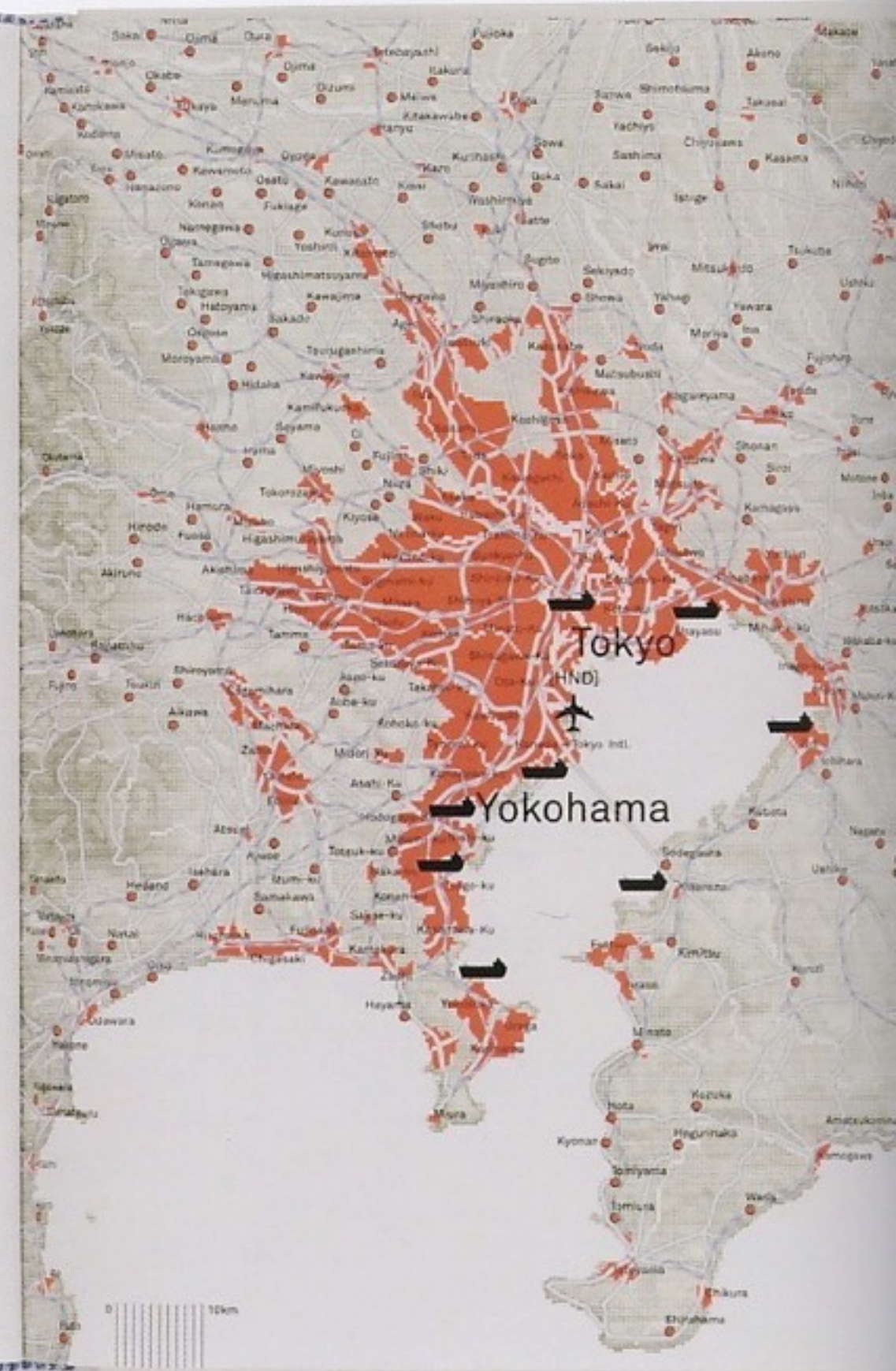
Average January temperature (°C)	1.7
Average July temperature (°C)	27.8

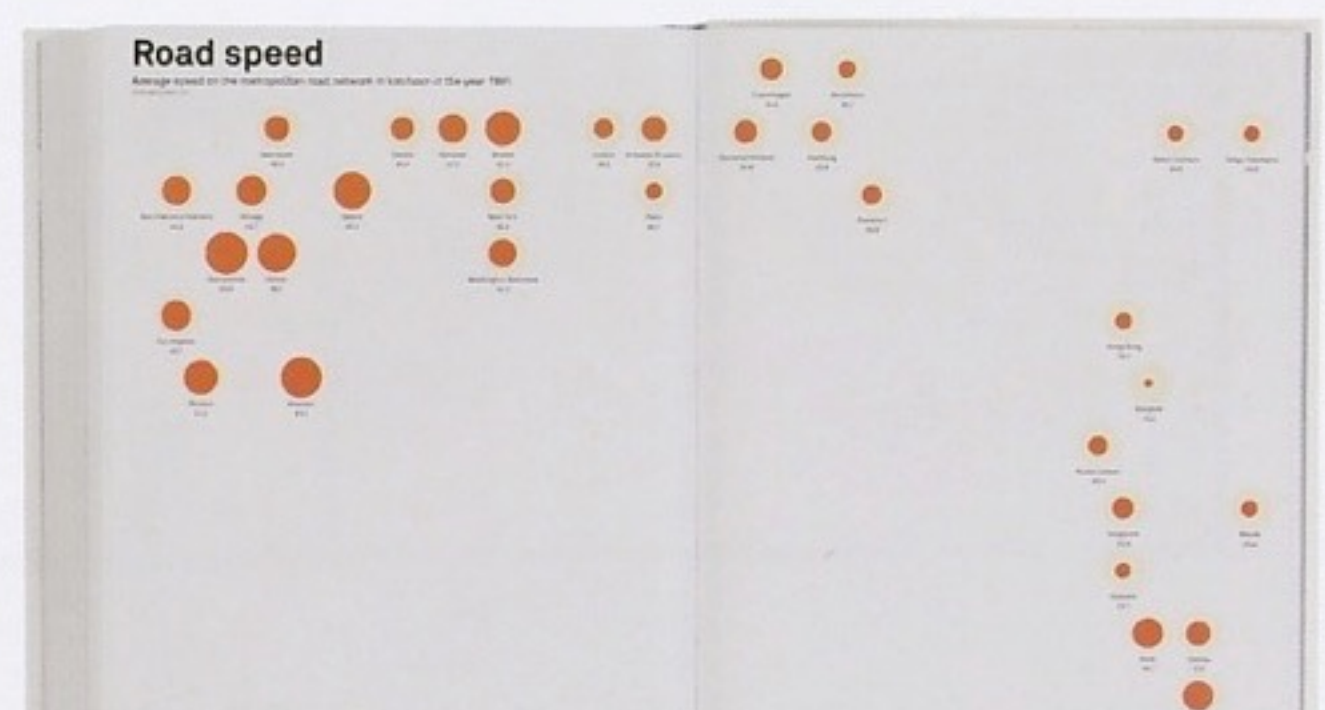
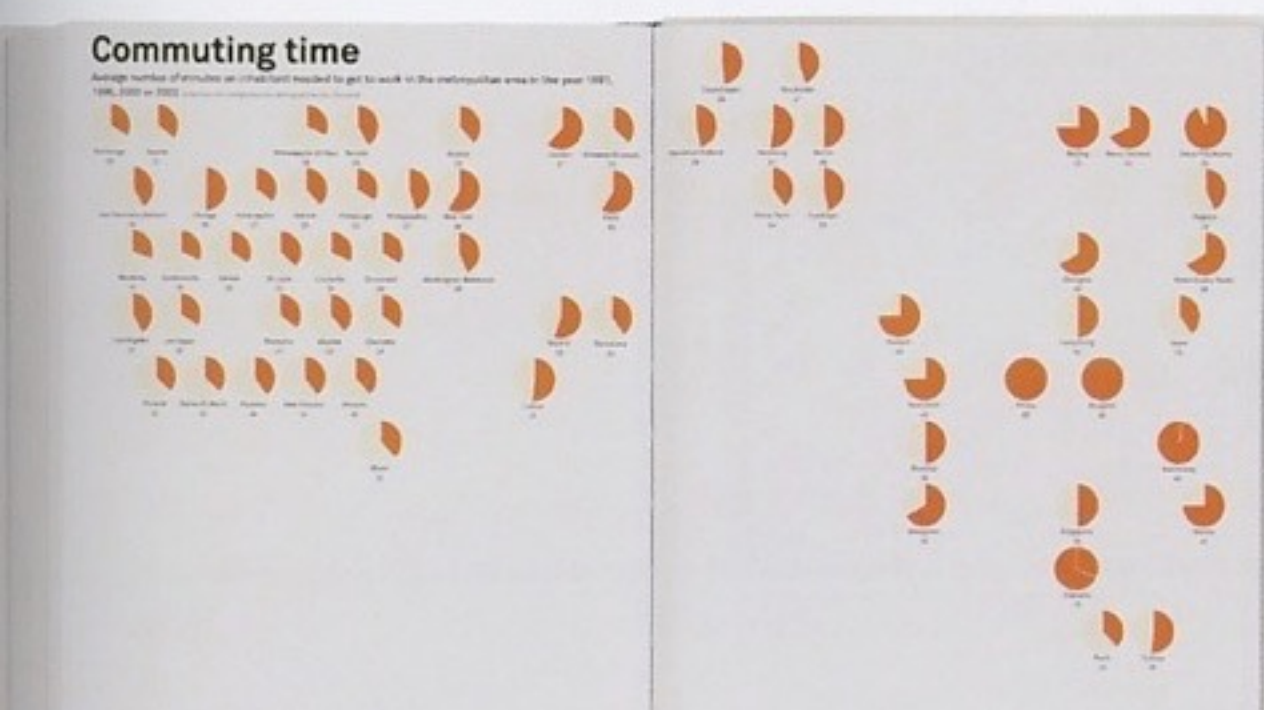
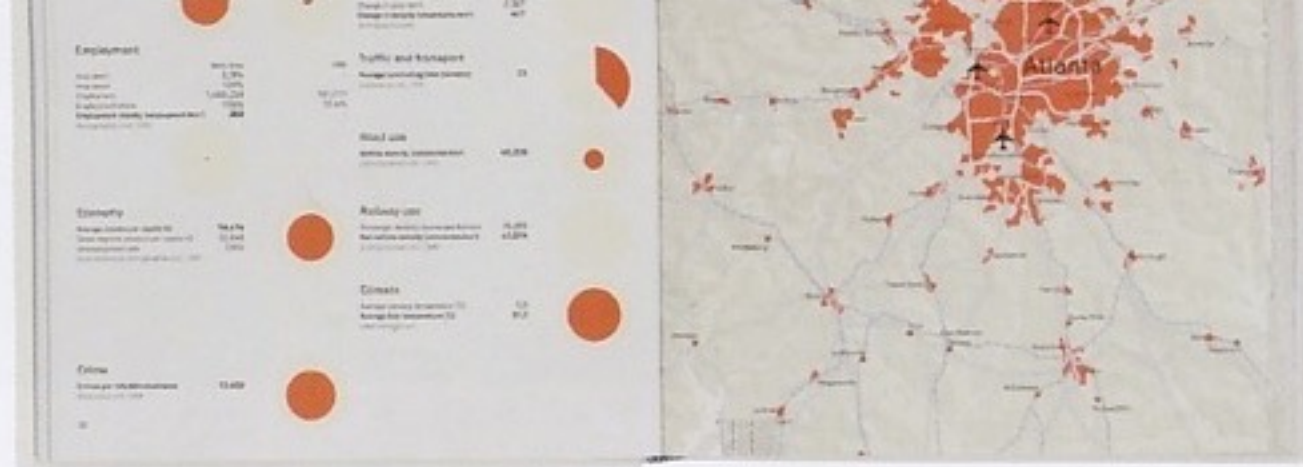
weatherbase.com

Pollution

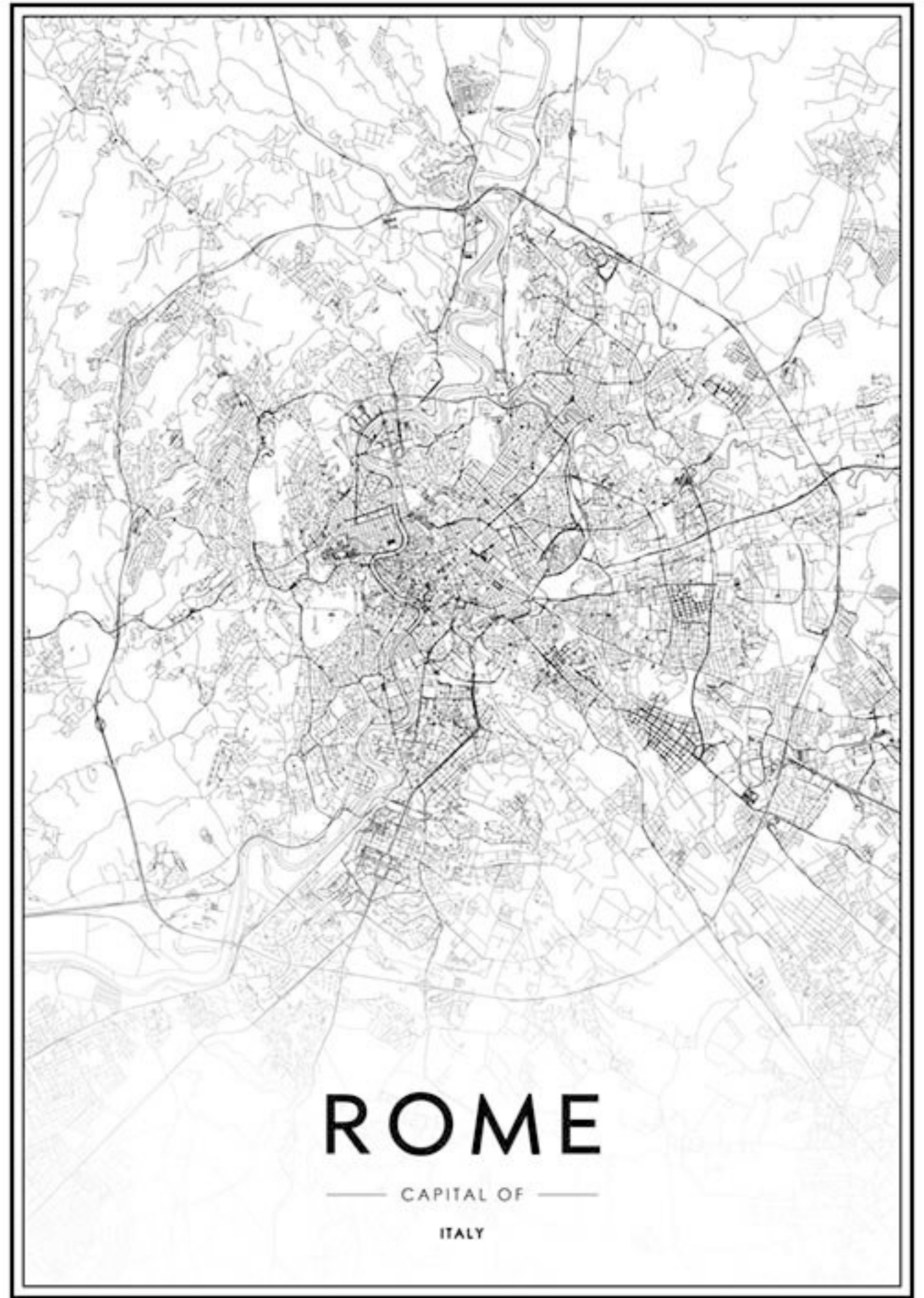
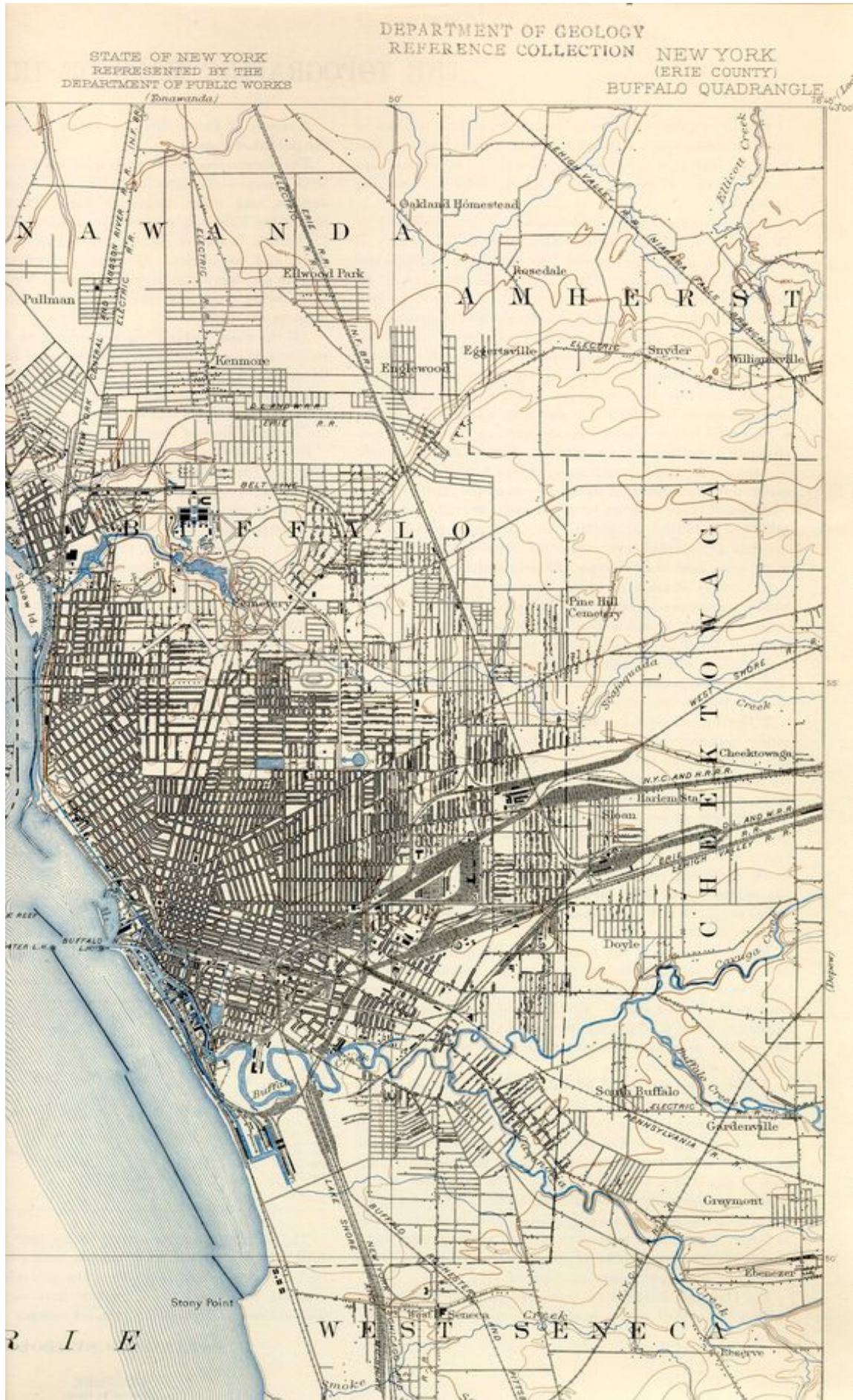
NOX (tonnes/km ²)	45.9
CO (tonnes/km ²)	149.4
VOC (tonnes/km ²)	20.8
Total pollution (tonnes/km ²)	216.2

demographia.com, 1990

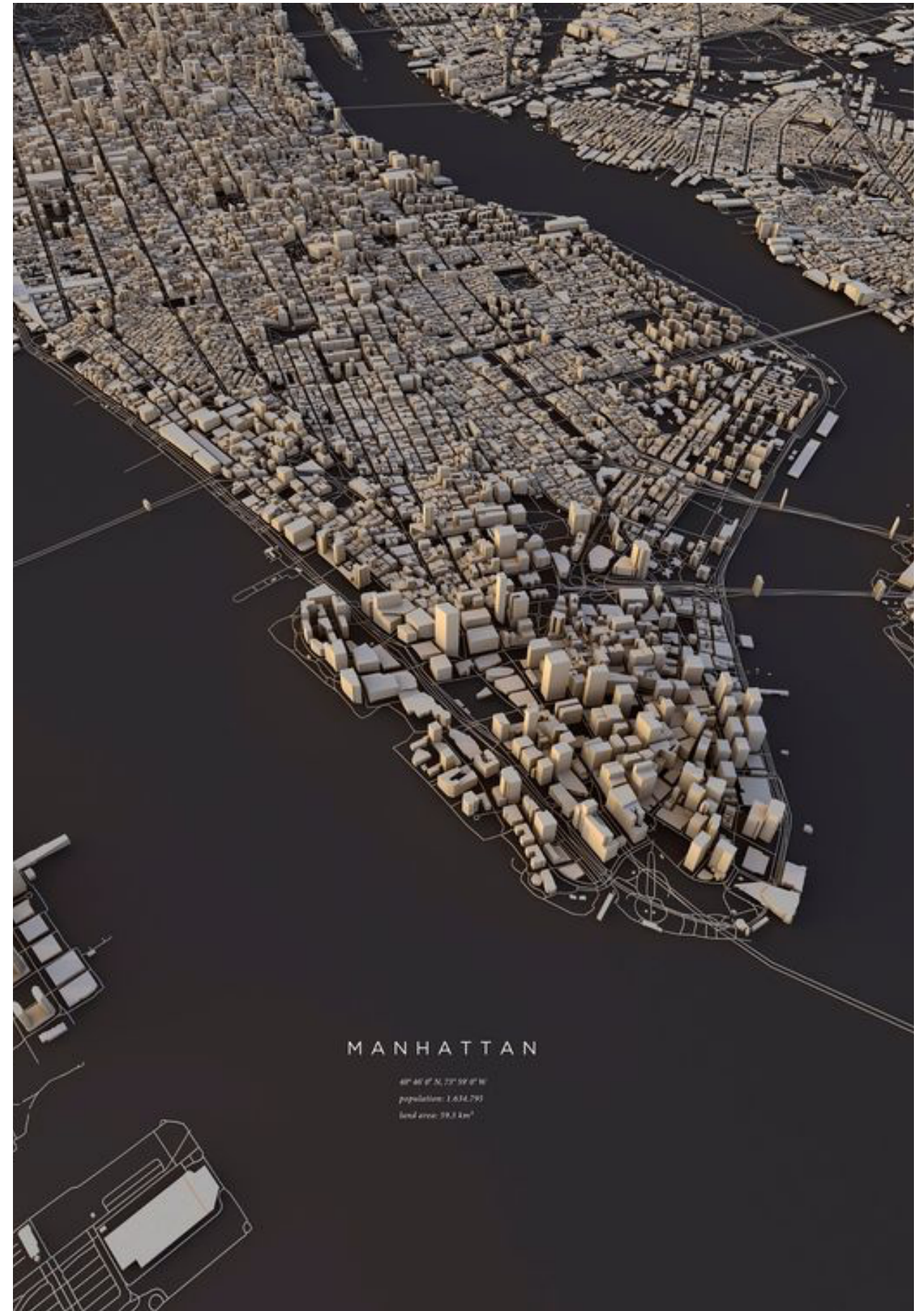




additional formats & experimentation

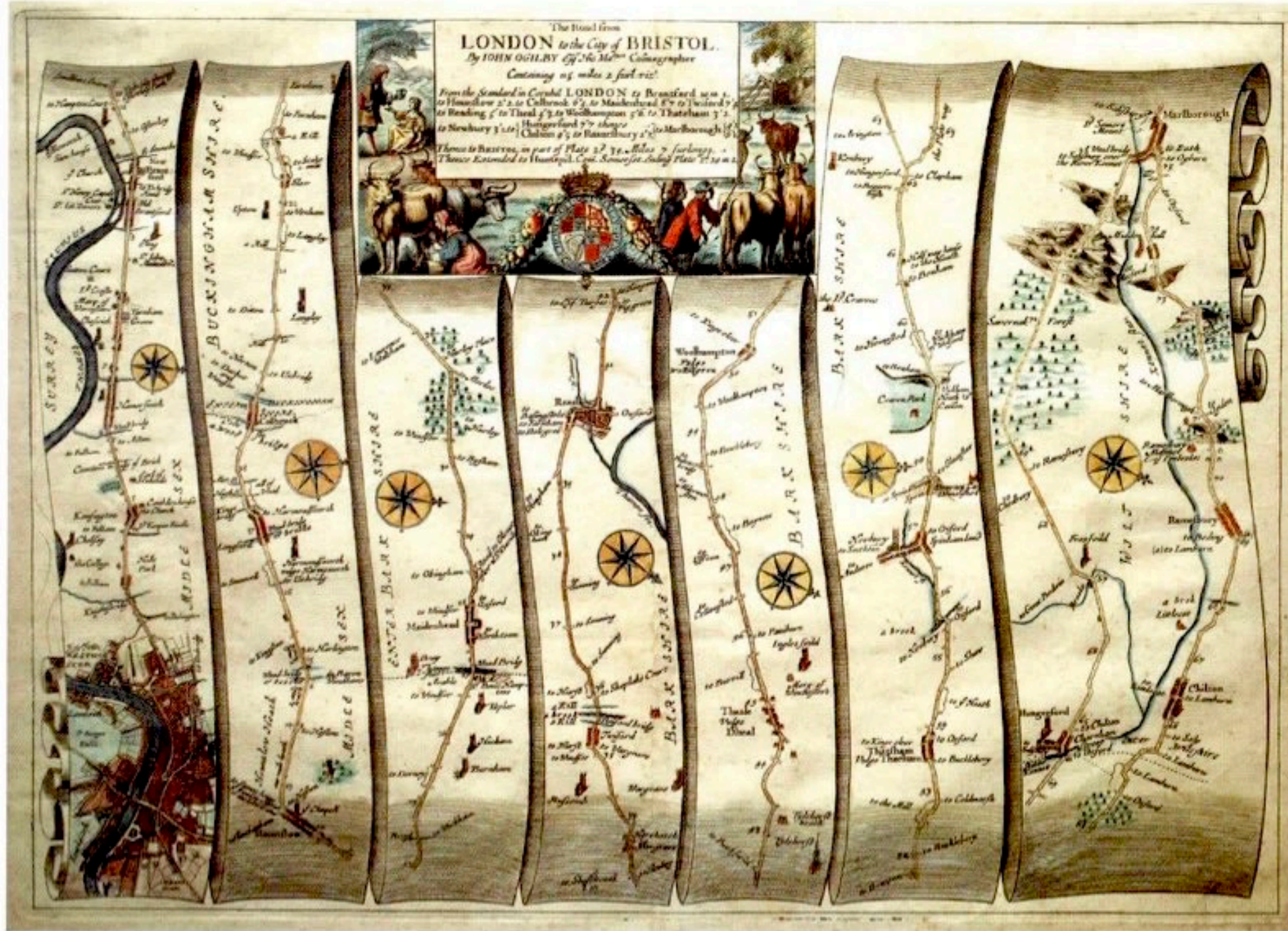


3D mapping



diagrammatic maps

**getting from one place
to the other**



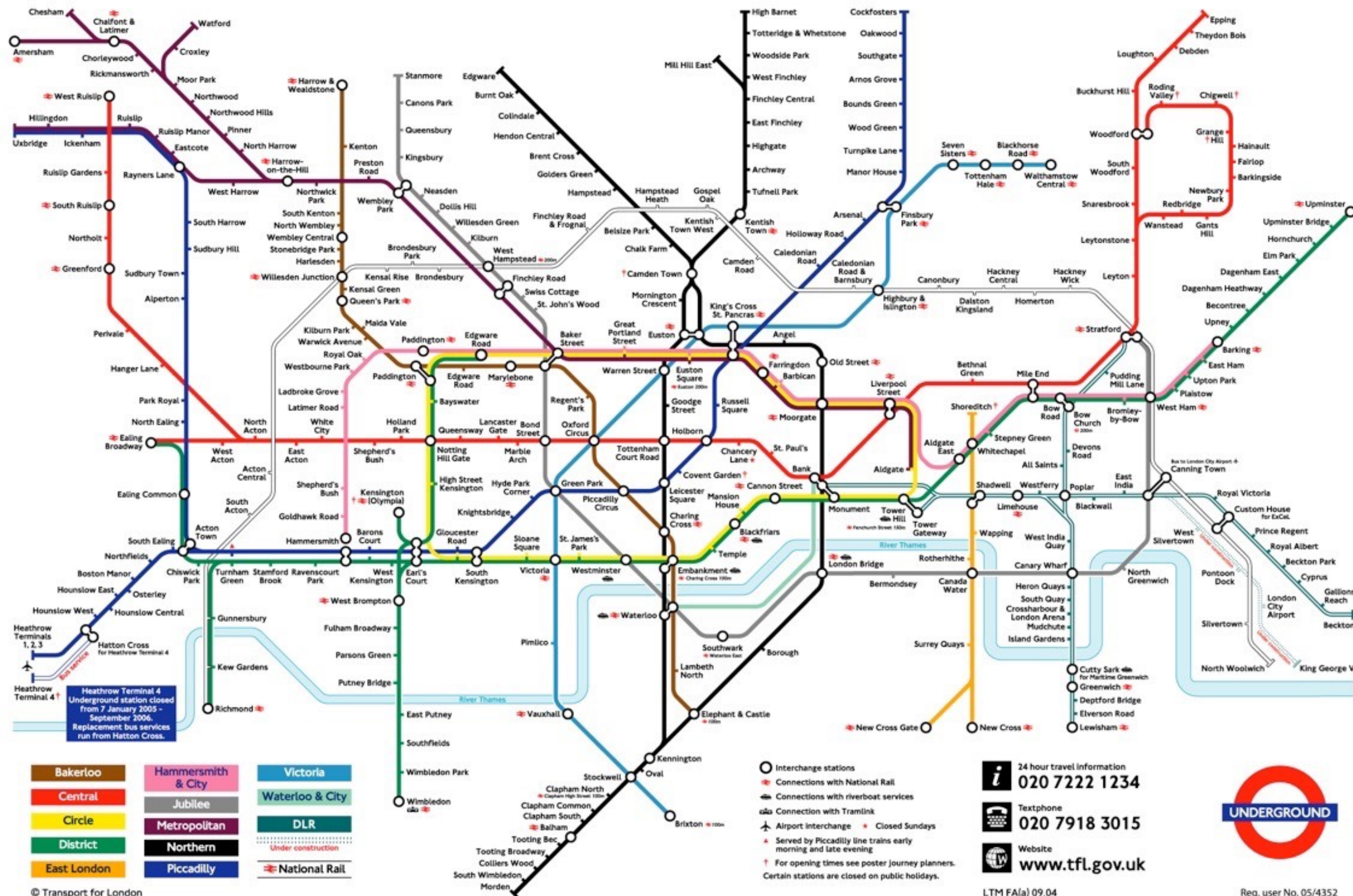
John Ogilby, U.K.: The Road from London to the City of Bristol, 1675.

This map was published in the *Britannia*, which is considered the first national road-atlas in Europe. The atlas presents over 100 folio-sized route maps in England and Wales. Michael Dover explains, "The maps, of seventy-five major roads and cross-roads, totalling 7,500 miles (12,500 kilometers), were presented in a continuous strip-form and, uniquely, on a uniform scale at 1 inch (2.5 cm) to a mile (1.6 kilometers). Of the hundred sheets of roads, most depicted a distance of about 70 miles (112 kilometers) on one sheet. The road is shown as a series of parallel strips. The surveyors noted whether the roads were enclosed by walls or hedges, or open, local landmarks, inns, bridges, (with a note on the material of construction), fords and sometimes cultivation in the countryside on either side of the road."³

Henry Beck's diagrammatic map

London Underground Map (1949)







**when reality is radically
schematized, the link with
that same reality is quickly
lost**

**όταν η πραγματικότητα
απεικονίζεται ριζικά, η
σχέση με την ίδια την
πραγματικότητα χάνεται
γρήγορα**

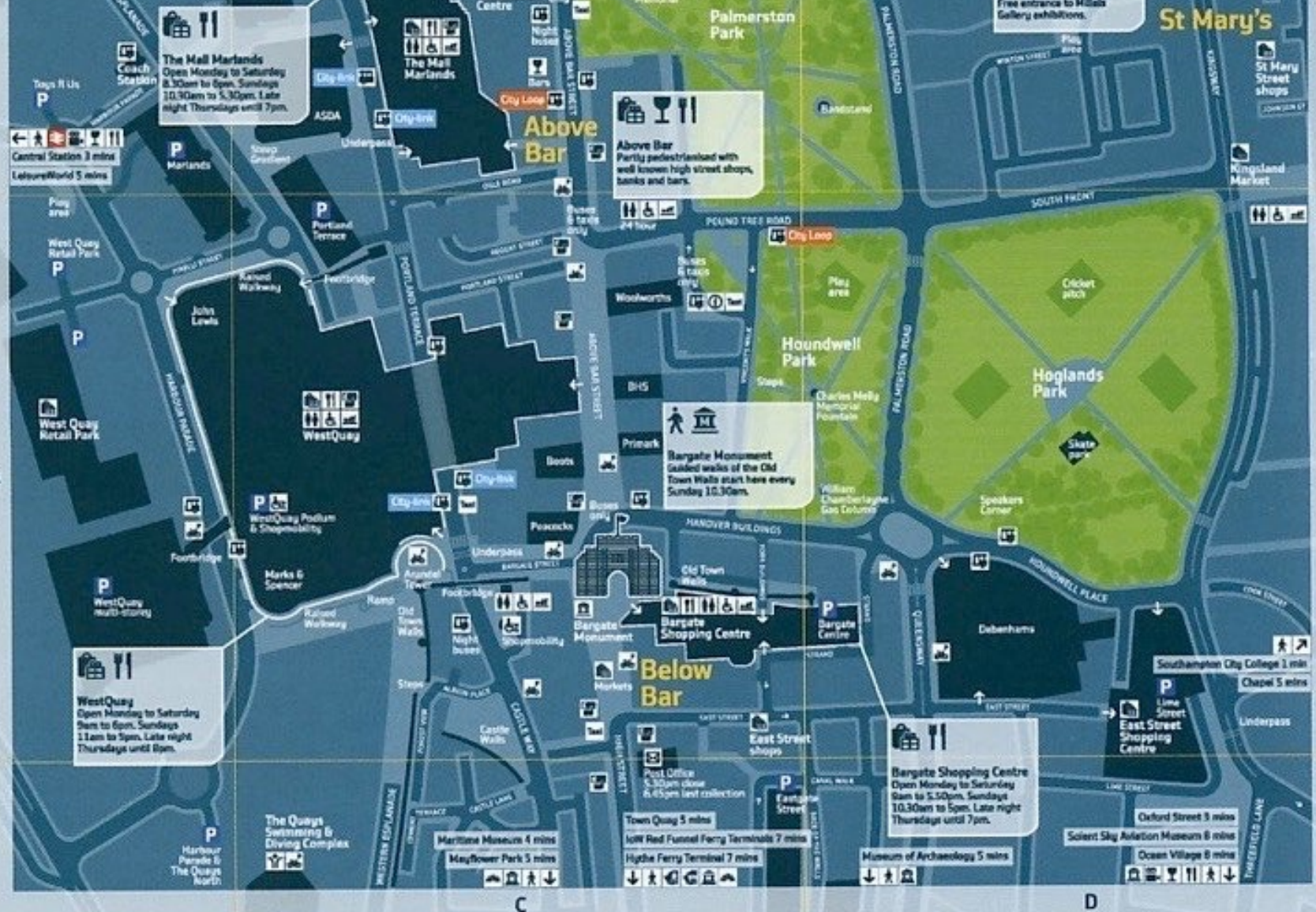
contemporary applications

+

central southampton.

+

bristol.



Welcome to Central Southampton.
Whether you are here for business or pleasure, this map is designed to help you get around, find your destination and enjoy the culture, shops and nightlife of the city centre. We hope you enjoy your visit.

Find out more

The Tourist Information Centre is located opposite the Civic Centre (C3) and provides a wide range of visitor information including advice and details on attractions, events, maps, guides and transport services throughout Southampton and the wider area. An accommodation booking service is also available.

Visit the Centre at 9 Civic Centre Road, opening hours are Monday to Saturday 9.30am to 5pm, Sundays and Bank Holidays 10am to 3.30pm.

You can call the Tourist Information Centre on 023 8083 3333 or visit their website www.visit-southampton.co.uk

For links to other Southampton websites and information about the city visit www.discover-southampton.co.uk

Useful contacts

Blue Funnel Cruises	023 8022 3278
Central Library	023 8063 2664
City Clipper bus	023 8068 2355
City Loop bus	023 8033 3442
City-link bus	023 8059 5974
First Travel Shop	023 8022 4854
Hythe Ferry	023 8084 0722
National Express	08705 80 80 80
National Rail	08457 48 49 50
Police	08450 45 45 45
Red Funnel Ferries	023 8033 4010
Shopmobility	
City	023 8063 1263
WestQuay	023 8033 6828
Solent Blue Line	023 8061 8233
Southampton Airport	0870 040 0009
Southampton	
City Council	023 8022 3855
Tourist Information	023 8083 3333
Traveline	0871 200 22 33
Walking Tours	023 8083 3333
WestQuay	023 8063 1263

About this map

This map is printed on Elemental Chlorine Free pulp obtained from sustainable forests. Please reuse, recycle or pass it on to a friend.

If you would like more copies of the map, please contact Walking Distance on 023 8023 7654.

Produced with the support of the European Regional Development Fund through Interreg III B North West Europe Programme, Southampton City Council, Southampton City Centre Management, Southampton Partnership and South East England Development Agency. Designed by City ID, this map forms part of the Southampton Legible City wayfinding system.

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Getting around

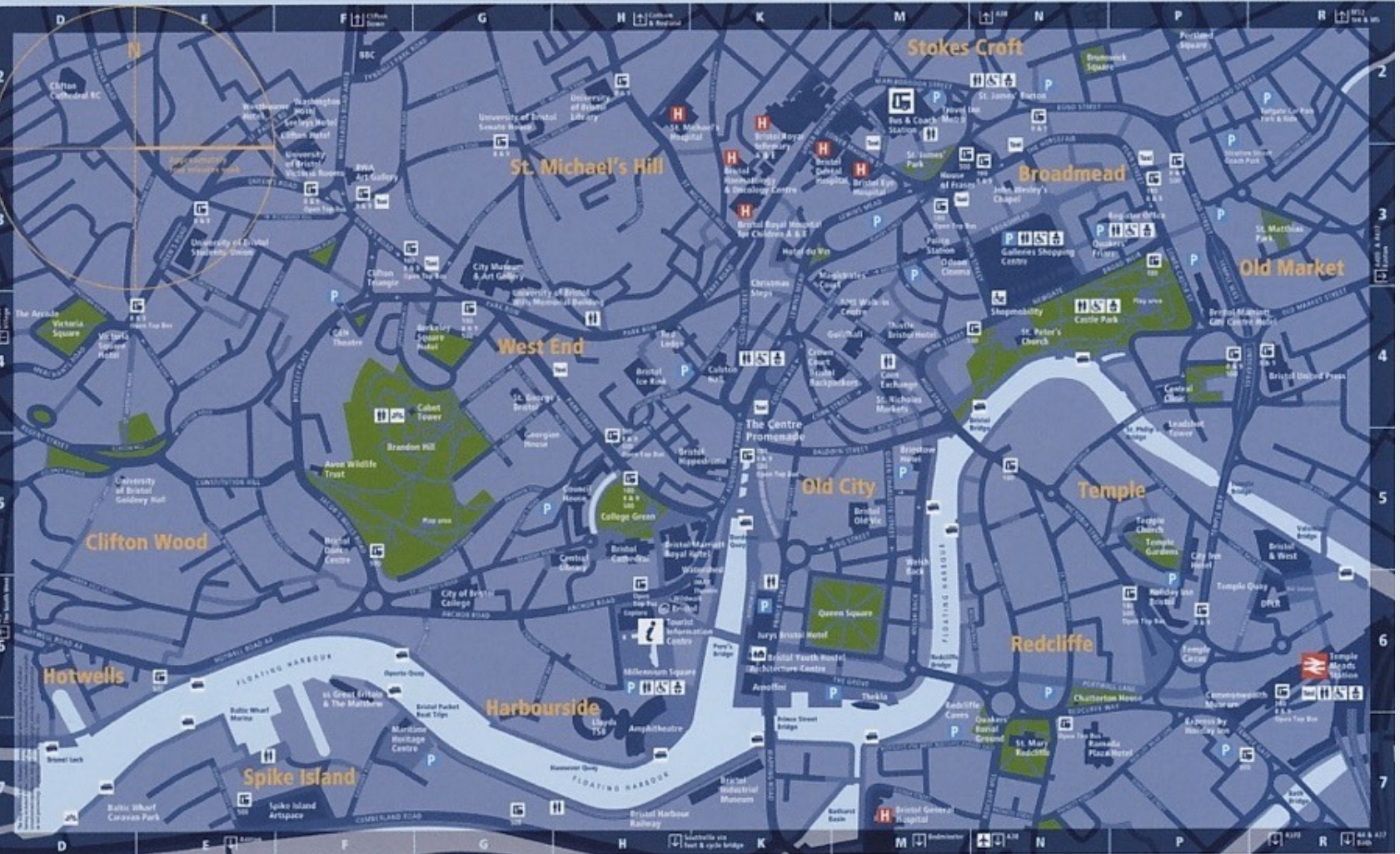
The City-link and City Loop bus services are free - principal stops are shown on the map above and on the reverse. The City Clipper connects you to central areas and destinations. For timetables and information on all public transport call Traveline.

traveline
0871 200 22 33



Welcome to Bristol

Bristol Architecture Centre	H6 Camera Obscura	A3 Council House	H5 Maritime Heritage Centre	F7 St. Nicholas Markets	M4 Anchor Road	H6 Deanery Road	G5 Park Street	M4 Rapier Street	M1 The Horsefair	N2 The Mall
Arnell Hall	K6 Central Library	H5 CREATE Centre	B7 Police Station	M3 Temple Meads Station	H6 Babbalan Street	K5 High Street	M4 Penn Street	P3 St. Augustine's Parade	K5 The Mall	C4 The Mall
Bristol Cathedral	K6 Christmas Steps	K4 Crown Court	H6 Red Lodge	H6 Tourist Information Centre	H6 Berkeley Place	F4 King Street	M5 Penn Street	K5 St. James' Barton	N2 Trenchard Street	M4 Trenchard Street
Bristol Hippodrome	K5 City of Bristol College	G3 Explore Bristol	H6 Register Office	F7 University of Bristol	H6 Bond Street	F3 Lewins Mead	K4 Queen Charlotte Street	M5 St. Paul's Road	M3 Union Street	M3 Union Street
Bristol Industrial Museum	K7 Clifton Suspension Bridge	G3 Galleries Shopping Centre	N3 BWA Art Gallery	F3 Students' Union	E3 Broadmead	N3 Marlborough Street	M2 Queen's Road	F3 Temple Gate	K2 Upper Maudlin Street	K2 Upper Maudlin Street
Bristol Old Vic	M5 Calton Hall	A4 Georgian House	K6 IMAX Theatre	F6 Wills Memorial Building	F3 Broad Street	M4 Millennium Square	H6 Queen Square	M6 Temple Quay	H6 Victoria Street	M6 Victoria Street
Bristol Zoo Gardens	B1 Commonwealth Museum	K4 John Wesley's Chapel	N3 St. George's Bristol	G4 Watershed	C3 Clifton Down Road	K3 Clifton Triangle	K3 Clifton Triangle	P5 The Centre Promenade	K5 Whitehall Road	F2 Whitehall Road
Bus & Coach Station	M2 Corn Exchange	M4 Magistrates' Court	K3 St. Mary Redcliffe	N7 Wills Memorial Building	H6 Corn Street	M4 Park Row	M4 Royal York Crescent	B5 The Grove	M6 Wine Street	M6 Wine Street



Transport icons and symbols:

- Transport: Icons for walking, cycling, bus, train, taxi, and car.
- Named transport: Icons for bus, bus & coach station, and train.
- National Cycle Network and walking trails: Icons for walking and cycling.
- Parking: Icons for parking, disabled parking, and bicycle parking.
- Named parking: Icon for named parking.
- Toilets: Icon for toilets.

Start of Bristol & Bath Railway Path

St. James' Barton Car Park



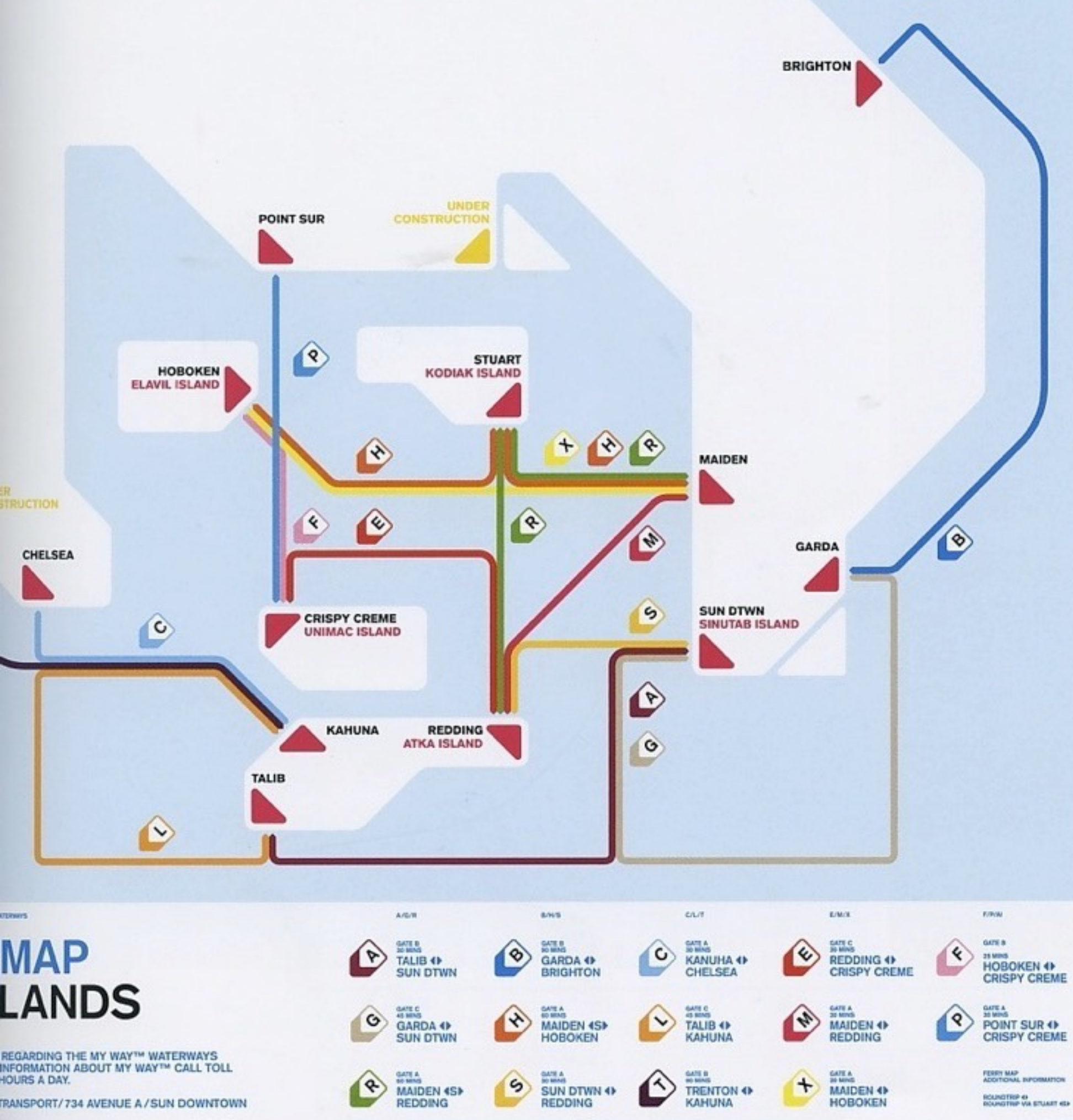
Welcome to Bristol

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ferry map (sun islands)

ferry map (sun islands)



Public Transportation:

Friday 5:30am to 12 Midnight
12 Midnight to 5:30am
and Sundays, 5:30am to 12 Midnight

NBC

10

10

10

Airport 4 ► Singale Island/Sun Otter.

Kahuna ◀ ▶ Sinitale Island/Chelsea

Unimac ◀ ▶ Devil Island / Mioboken

Kodjak 43 Simutab Island/Sun Ma

Mayden • Alaska Island / Redding

6/11/00 4:30 PM Sinutab Island/Point Sur

Kodak: 6 ▶ Simutab Island / Sum I

Chen. 4 ▶ Alaska Island / Redding

Kahuna 4 ▶ Simutab Island/Trenton

Meiden ◀ ▶ Elysi Island/Hoboken

single Sun Island:

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

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Figure 4.5. Blue Island/Tailb. Meadow

verbanen! please contact jencia.

or call 800-253-MYWAY.

Public Transportation:

1

contact the STA or the

call 800-723-SKYWAY.

under

Lake

Hauptstadt der Sum-Inlande

01.5.1 Zoom In/Sun Downtown



Sights of Sun Downtown

- | | |
|---------------------------------|-------------------------|
| 01 Federal Building | 13 Sun Pleasures Center |
| 02 Marina Seafood | 14 Simulab Center |
| 03 Subtrans Transport Authority | 15 Sky Way™ Building |
| | 16 Six Magnification |

This map may not be sold or offered for sale without written permission from the New Testament Publishers.

**water ways (left)/
sights (right)/**

mapping of non physical space

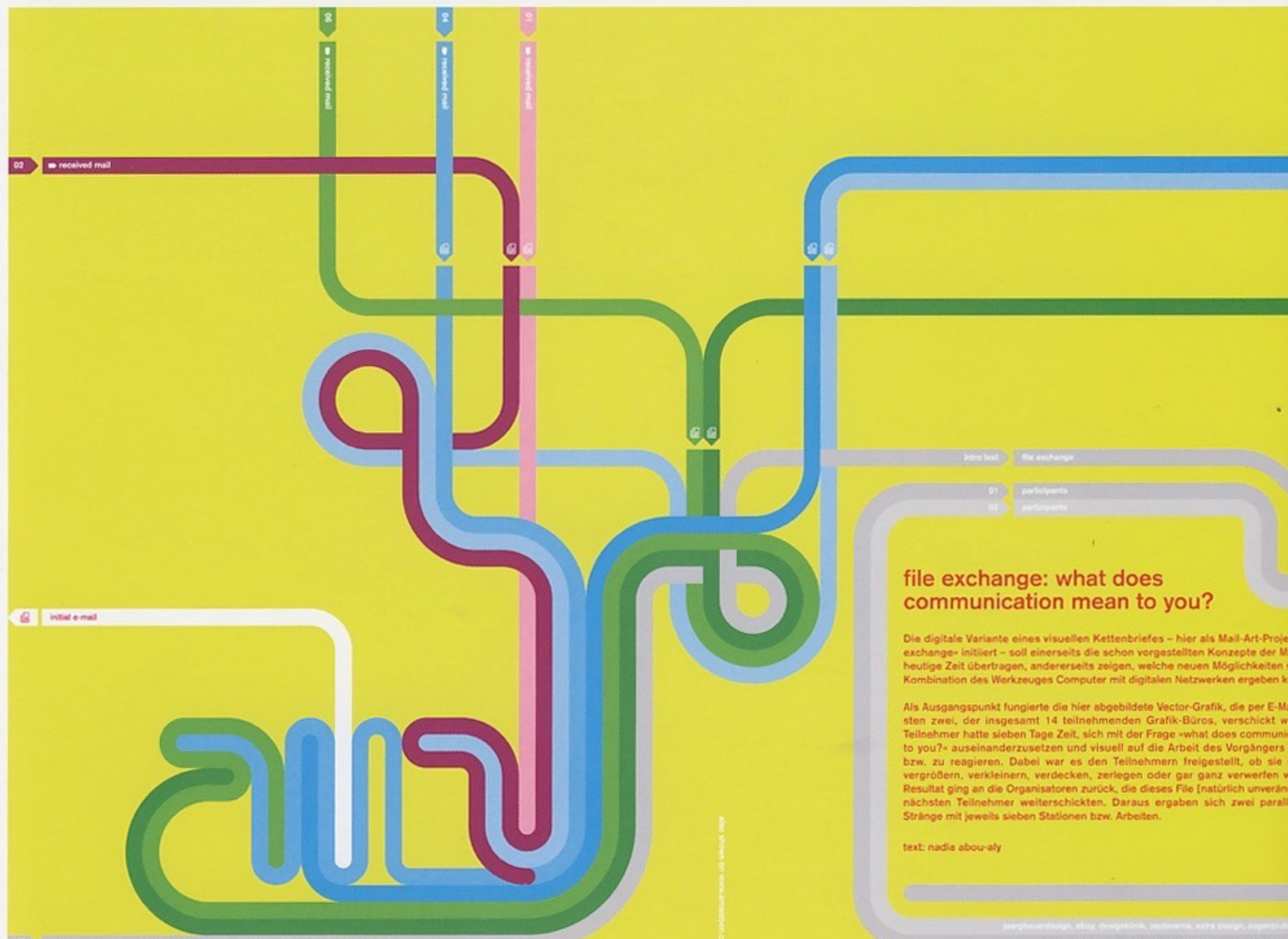
participants 01

joergbauerdesign, ebay, designklinik, vectorama,
extra design, augenbluten, sweden graphics

participants 02

norm, lahm, linientreu, michael waterfield,
jasper goodall, phunkstudio, laurent fétis

file exchange



file exchange: what does communication mean to you?

Die digitale Variante eines visuellen Kettenbriefes – hier als Mail-Art-Projekt «file exchange» initiiert – soll einerseits die schon vorgestellten Konzepte der Mail-Art in die heutige Zeit übertragen, andererseits zeigen, welche neuen Möglichkeiten die Kombination des Werkzeuges Computer mit digitalen Netzwerken ergeben kann.

Als Ausgangspunkt fungierte die hier abgebildete Vector-Grafik, die per E-Mail an zwei, der insgesamt 14 teilnehmenden Grafik-Büros, verschickt wurde. Jeder Teilnehmer hatte sieben Tage Zeit, sich mit der Frage «what does communication mean to you?» auseinanderzusetzen und visuell auf die Arbeit des Vorgängers zu reagieren. Dabei war es den Teilnehmern freigestellt, ob sie die Grafik vergrößern, verkleinern, verdecken, zerlegen oder gar ganz verwerfen wollten. Das Resultat ging an die Organisatoren zurück, die dieses File (natürlich unverändert) an den nächsten Teilnehmer weiterschickten. Daraus ergaben sich zwei parallele Stränge mit jeweils sieben Stationen bzw. Arbeiten.

text: nadia abou-aly



My Weather

Weather

5 Day Outlook
Location: Cardiff
Date: 21/03/01
Forecast:
Partly Cloudy
Temp: 7°C

Date: 22/03/01
Forecast:
Heavy Cloud
Temp: 7°C

Date: 23/03/01
Forecast:
Partly Cloudy
Temp: 7°C

Date: 24/03/01
Forecast:
Sunny
Temp: 7°C

Date: 25/03/01
Forecast:
Snow
Temp: 7°C

7 Day Outlook
Today's Weather
UK regions
Europe

My AOL

AOL Weather
AOL Services
AOL Help-Weather



My Weather

North
Midlands
South East
South West
Wales
Scotland

7 Day Outlook
Today's Weather
UK regions
Europe

My AOL
My Weather

AOL Weather
AOL Services
AOL Help-Weather

Options Back



My Weather

Athens
Barcelona
Berlin
Brussels
Cologne
Moscow
Oslo
Rome

7 Day Outlook
Today's Weather
UK regions
Europe

My AOL
My Weather

AOL Weather
AOL Services
AOL Help-Weather

Options Back



My AOL

My News
My Leisure
My Weather
AOL Services
AOL Help

Options Back



My News

Home: 3 Items
> Ford's offer for Land Rover
Read

> Soap shock in store for Royal Family
Read

> British worker dies of fever
Read

Finance: 3 Items
> London shares rise
Read

> Buy into value
Read

> Sun Life jumps 25% on AOL buyout
Read

Sport: 3 Items
> England sets the standard
Read

> Herbert hopes his Jaguar purrs
Read

> Hitzel for Sunderland
Read



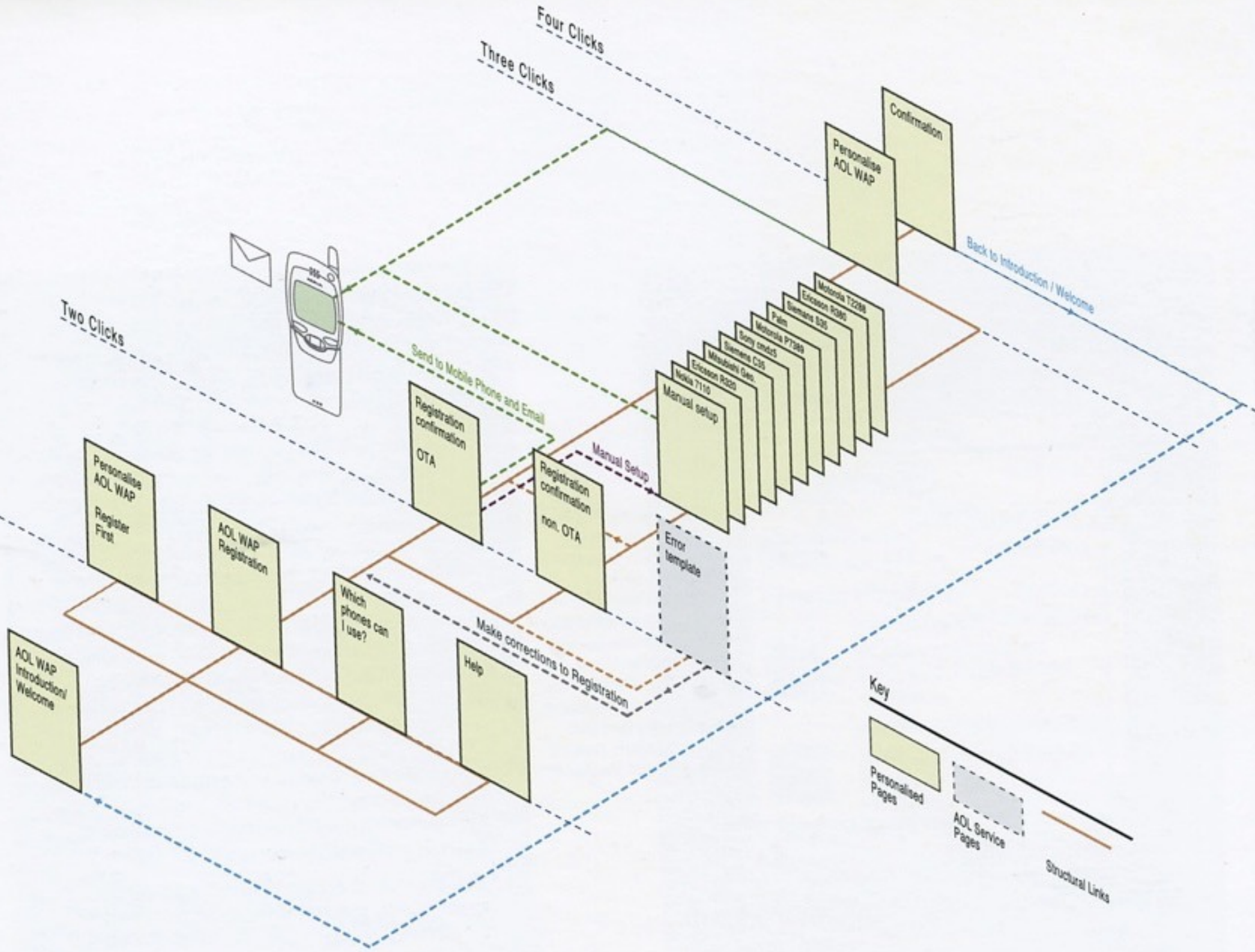
My News

FORD OFFER FOR LAND ROVER
British car maker Rover came under more pressure this morning after another bid from US giant Ford.

My AOL
My News

AOL Services
AOL News
AOL Help-News

Options Back

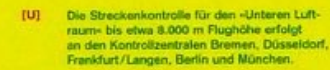


[B] Horizontaler Sicherheitsabstand



[B] Der horizontale Abstand zweier Flugzeuge auf gleicher Höhe muss mindestens fünf Seemeilen, also rund neun Kilometer, betragen.

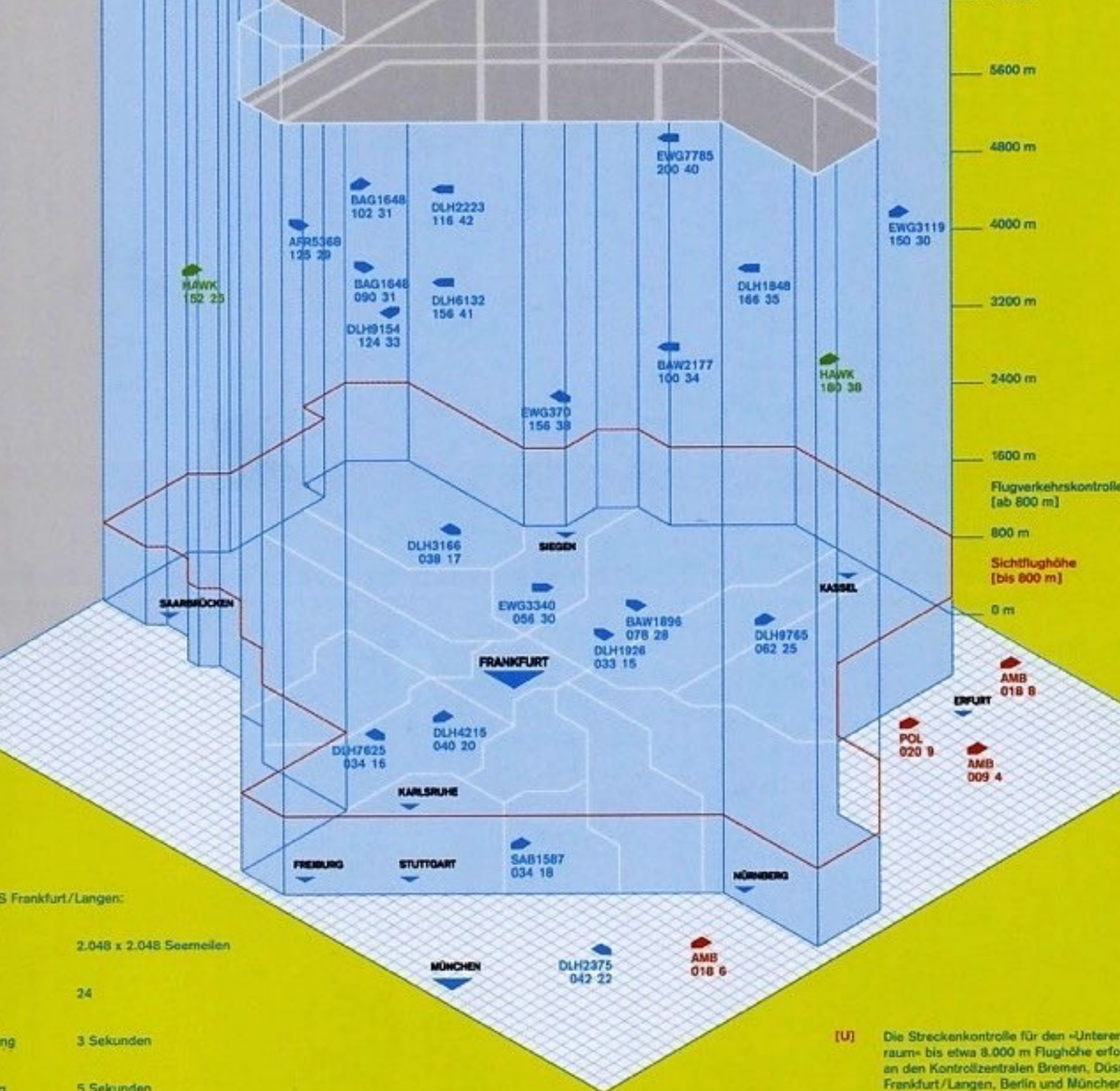
Überflughöhe [ab 8000 m]
Flugverkehrsleitzung durch EUROCONTROL
8000 m [Ende Unterer Flugraum]
Ende der Flugverkehrskontrolle durch DSF-Langen [ab 8000 m]

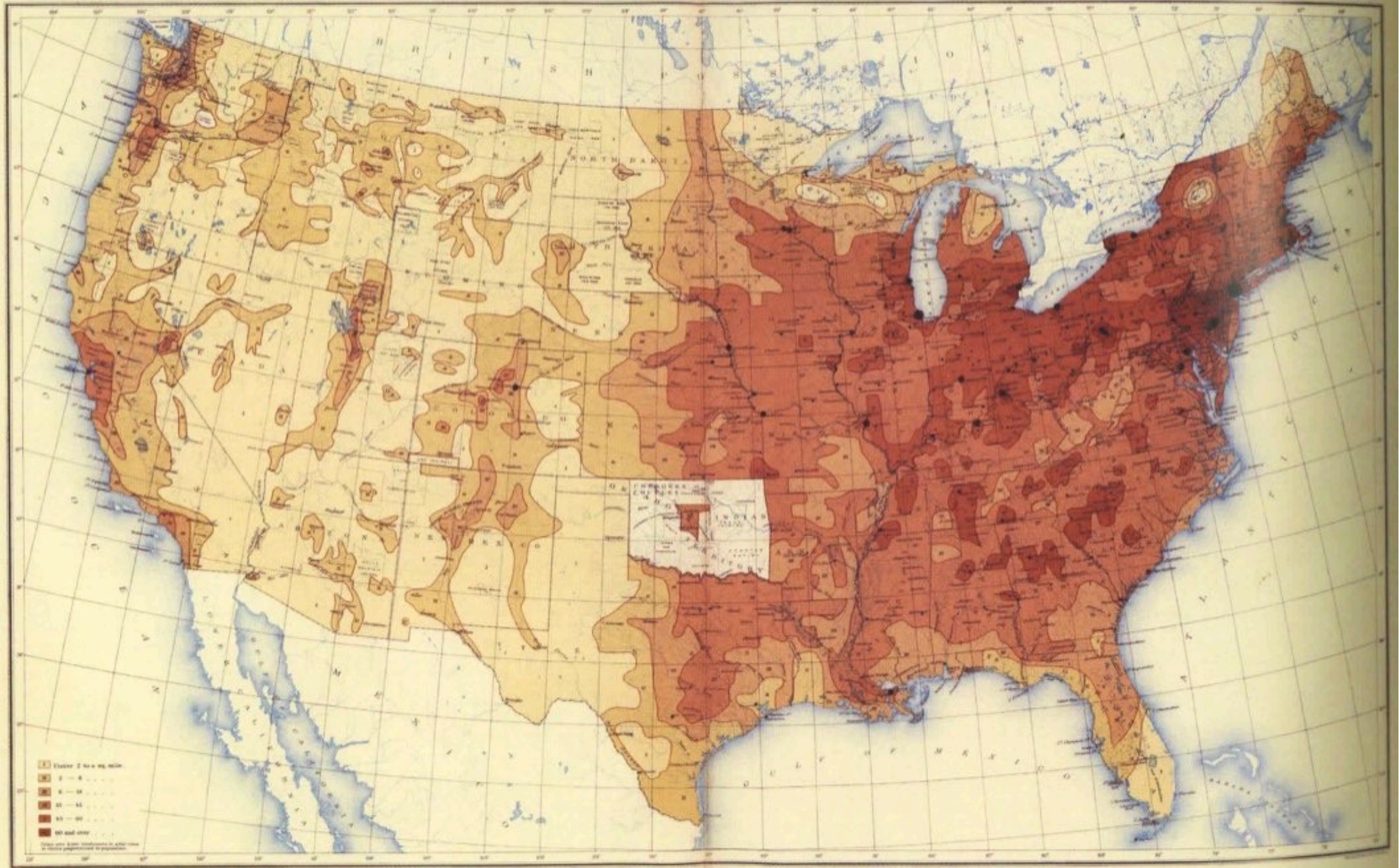


**the diagram shows the
given information from
the radar monitor of the
air traffic controller**

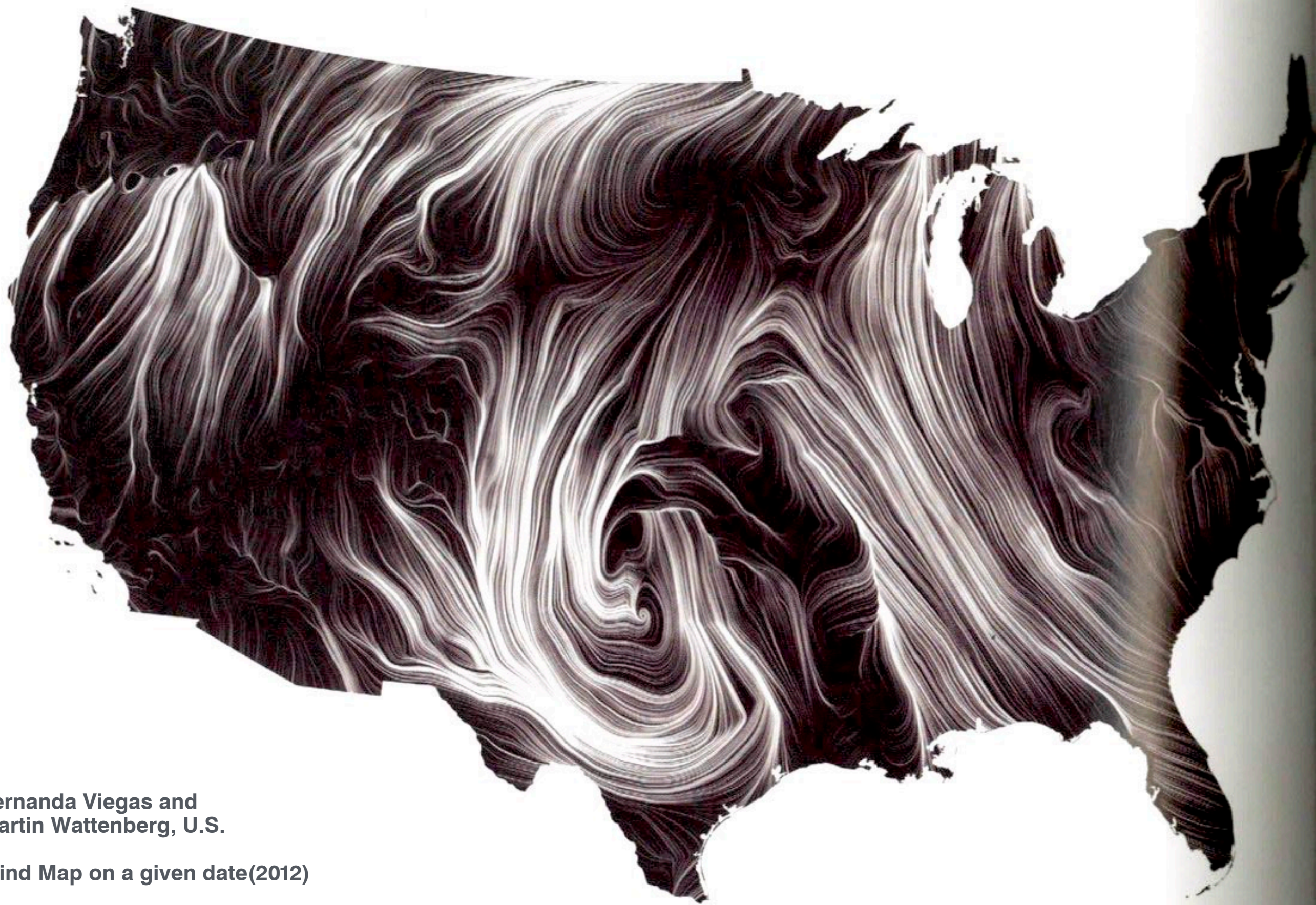
mapping air traffic control network

the diagram shows the given information from the radar monitor of the air traffic controller



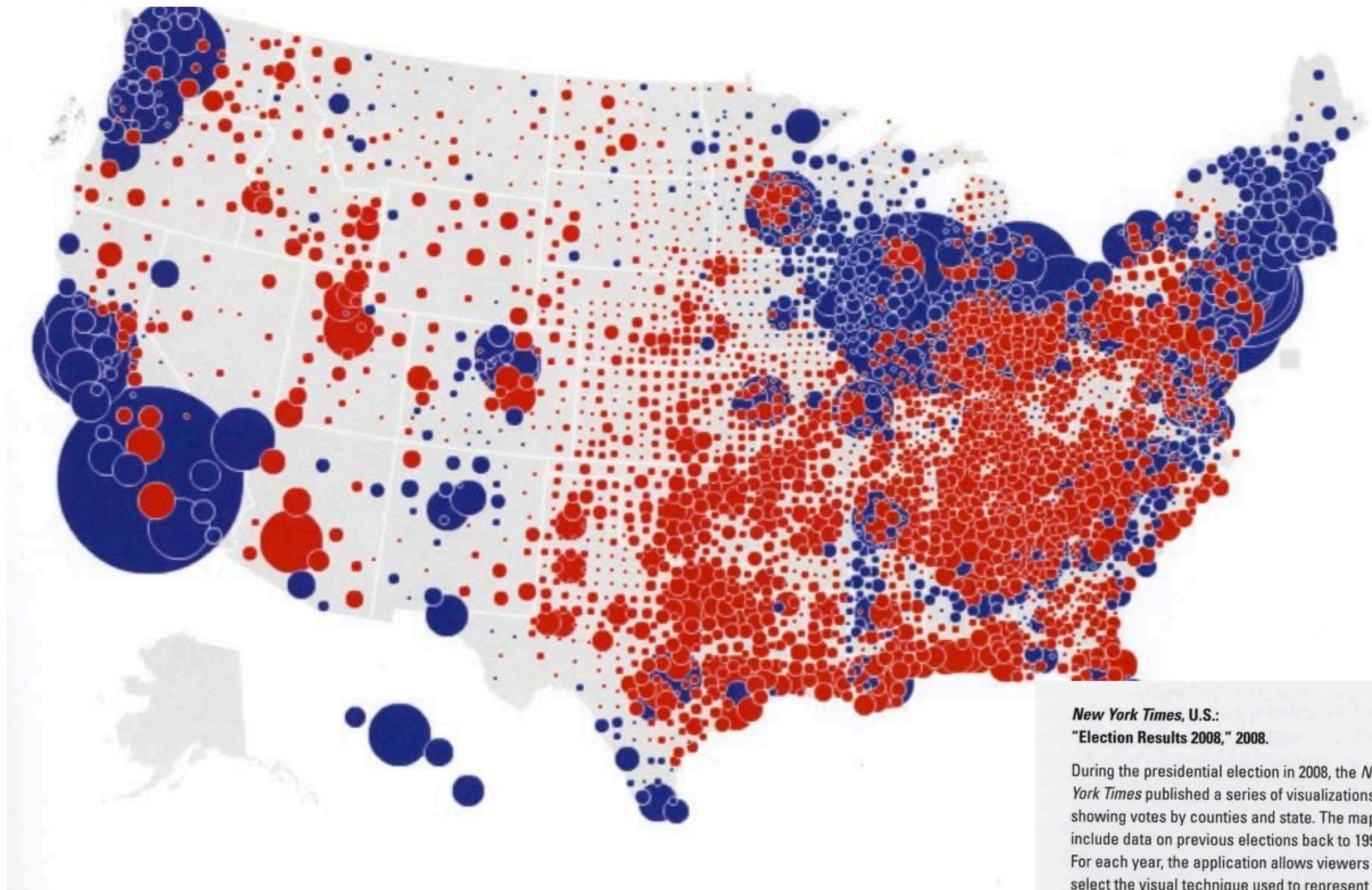


Henry Gannett,
USA Distribution of Population (1890)



Fernanda Viegas and
Martin Wattenberg, U.S.

Wind Map on a given date(2012)



Obama VS McCain
Election Results 2008

***New York Times, U.S.:
"Election Results 2008," 2008.***

During the presidential election in 2008, the *New York Times* published a series of visualizations showing votes by counties and state. The maps include data on previous elections back to 1992. For each year, the application allows viewers to select the visual technique used to represent the data. This spread focuses on the graduated dot symbolization. A comparison with the choropleth technique is available on the next page.

<http://elections.nytimes.com/2008/results/president/map.html>

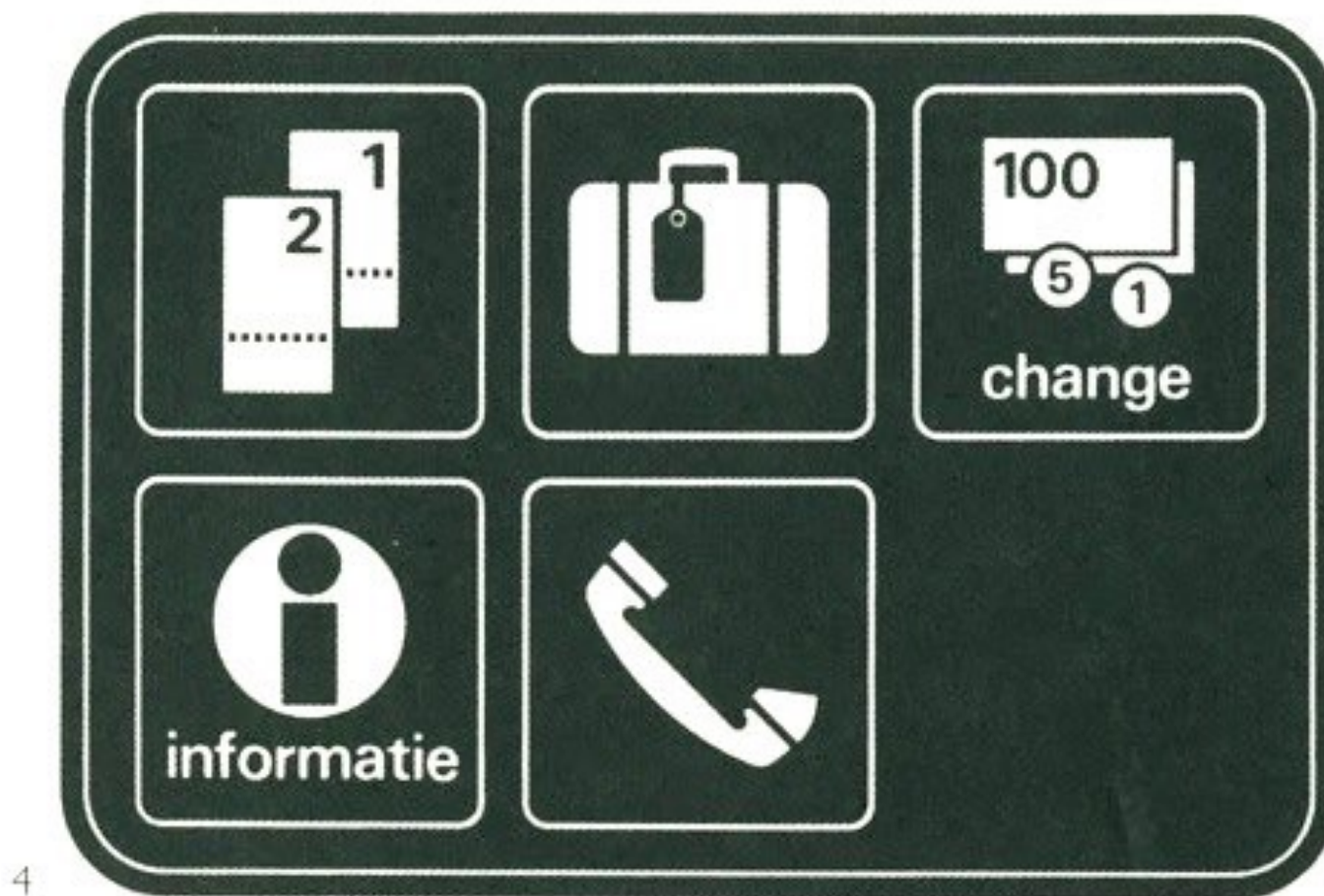
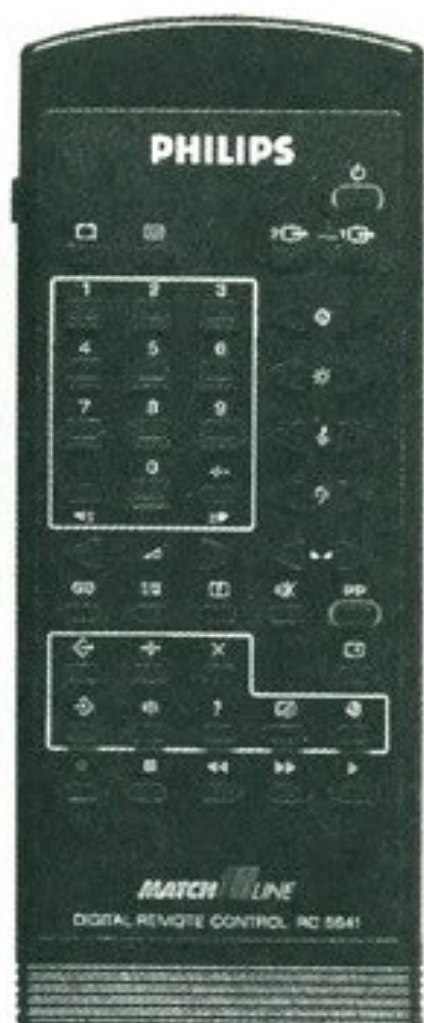
iconography (pictograms)

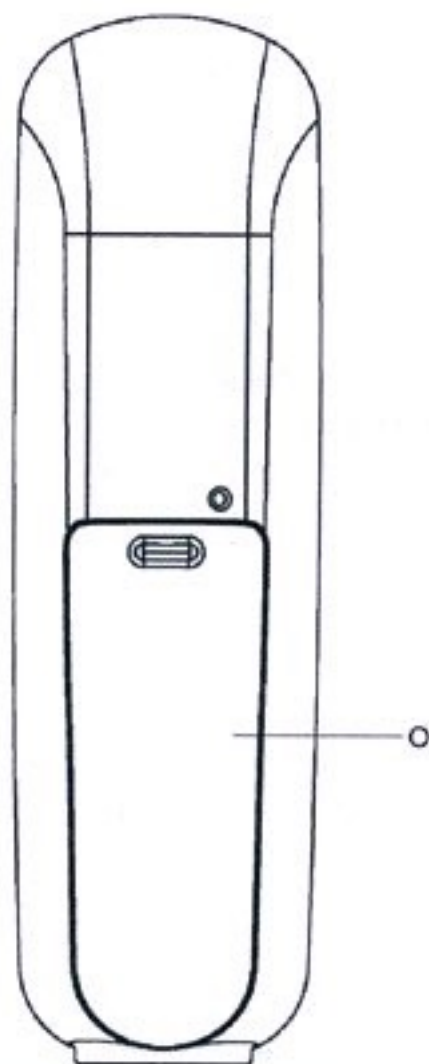
είναι μια απλοποιημένη
εικονογραφική
αναπαράσταση που μας
βοηθά πιο εύκολα να
κατανοήσουμε ένα φυσικό
αντικείμενο, μια κατάσταση
ή μια έννοια



universalists

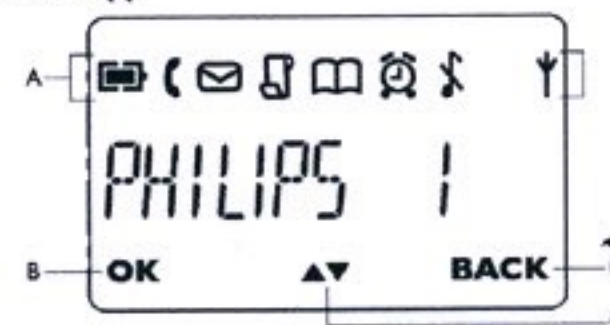
**η οπτική επικοινωνία,
χωρίς την χρήση των
λέξεων θα μπορούσε να
γίνει μια παγκόσμια
βοηθητική γλώσσα.**





Ο Κάλυμμα μπαταριών

2.3 Εικονίδια οθόνης



A Μπάρα κατάστασης



Υποδεικνύει ότι η μπαταρία είναι πλήρως φορτισμένη.



Υποδεικνύει ότι η μπαταρία είναι πλήρως αποφορτισμένη.



Υποδεικνύει ότι μια εσωτερική κλήση έχει συνδεθεί ή είναι σε αναμονή. Το εικονίδιο αναβοσβήνει κατά την λήψη μιας εισερχόμενης κλήσης.



Υποδεικνύει λήψη νέου φωνητικού μηνύματος. Το εικονίδιο αναβοσβήνει όταν υπάρχουν μη αναγνωσμένα μηνύματα. Εμφανίζεται κατά την πρόσβαση στο αρχείο κλήσεων. Το εικονίδιο εμφανίζεται όταν υπάρχουν νέες αναπάντητες κλήσεις. Εμφανίζεται κατά την πρόσβαση στον τηλεφωνικό κατάλογο.



Εμφανίζεται όταν το ξυπνητήρι είναι ενεργοποιημένο. Εμφανίζεται όταν το κουδούνισμα είναι απενεργοποιημένο.



Υποδεικνύει ότι το ακουστικό είναι εγγεγραμμένο και εντός εμβέλειας του σταθμού βάσης. Το εικονίδιο αναβοσβήνει όταν το ακουστικό είναι εκτός εμβέλειας ή αναζητά μια βάση.

B Πλήκτρο OK

Εμφανίζεται κατά τη λειτουργία μενού για να επιβεβαιώσετε την επιλογή σας.

C Πλήκτρο ▲▼

Υποδεικνύει ότι περισσότερες επιλογές είναι διαθέσιμες. Χρησιμοποιήστε τα πλήκτρα πλοήγησης για να μετακινηθείτε επάνω/κάτω. Αύξηση ▲ ή μείωση ▼ της έντασης του ακουστικού κατά την κλήση.

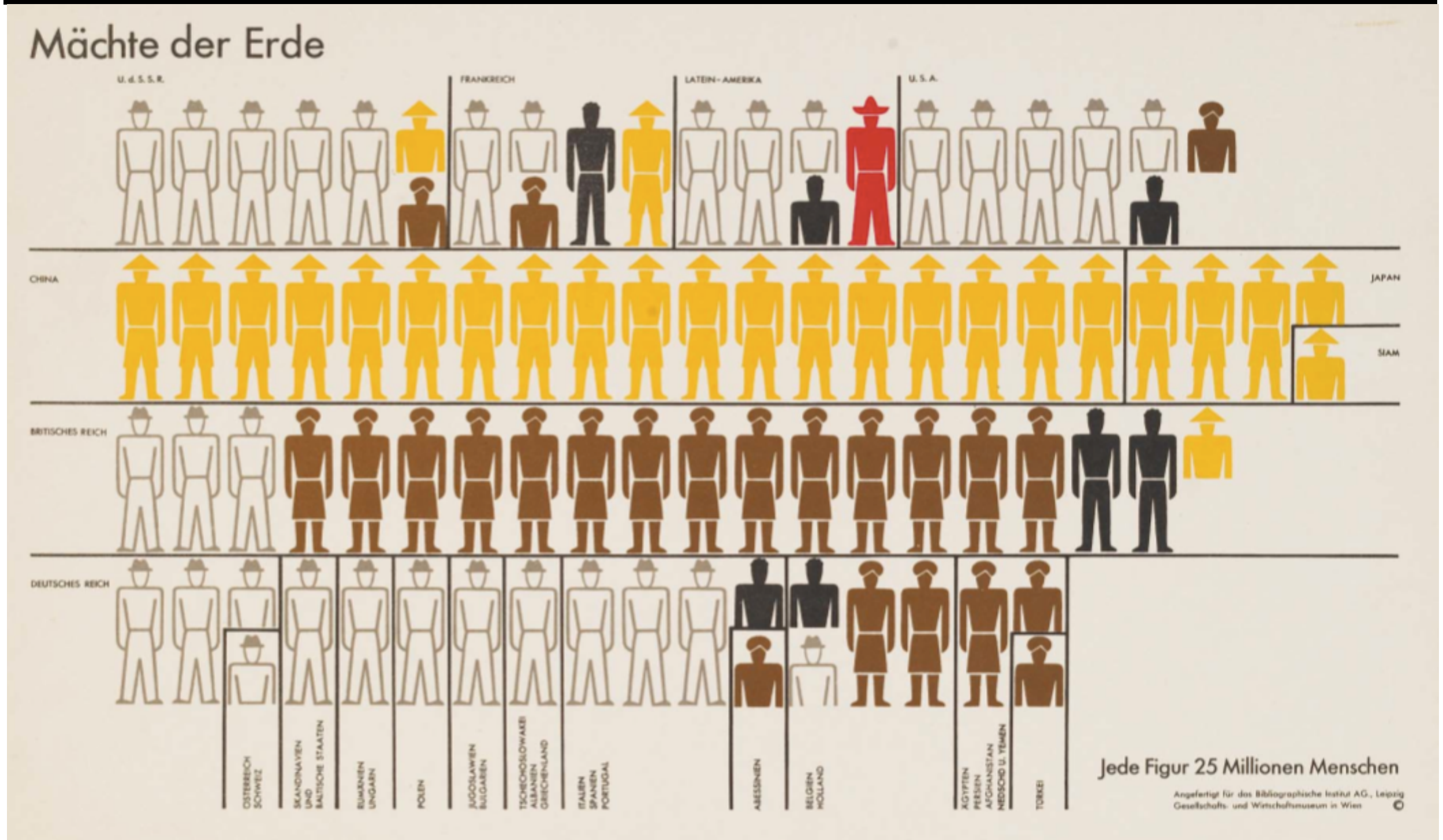
D Πλήκτρο Επιστροφή

Εμφανίζεται όταν βρίσκεστε σε λειτουργία μενού. Επιλέξτε **BACK** για να επιστρέψετε στο προηγούμενο επίπεδο μενού. Επιλέξτε **BACK** για να διαγράψετε το τελευταίο ψηφίο/χαρακτήρα που εισήχθη.

Otto Neurath (1882-1945)

ISOTYPE METHOD

International System of Typographic Education (1930)/
2000 symbols of visual dictionary/
international language/



Neurath:

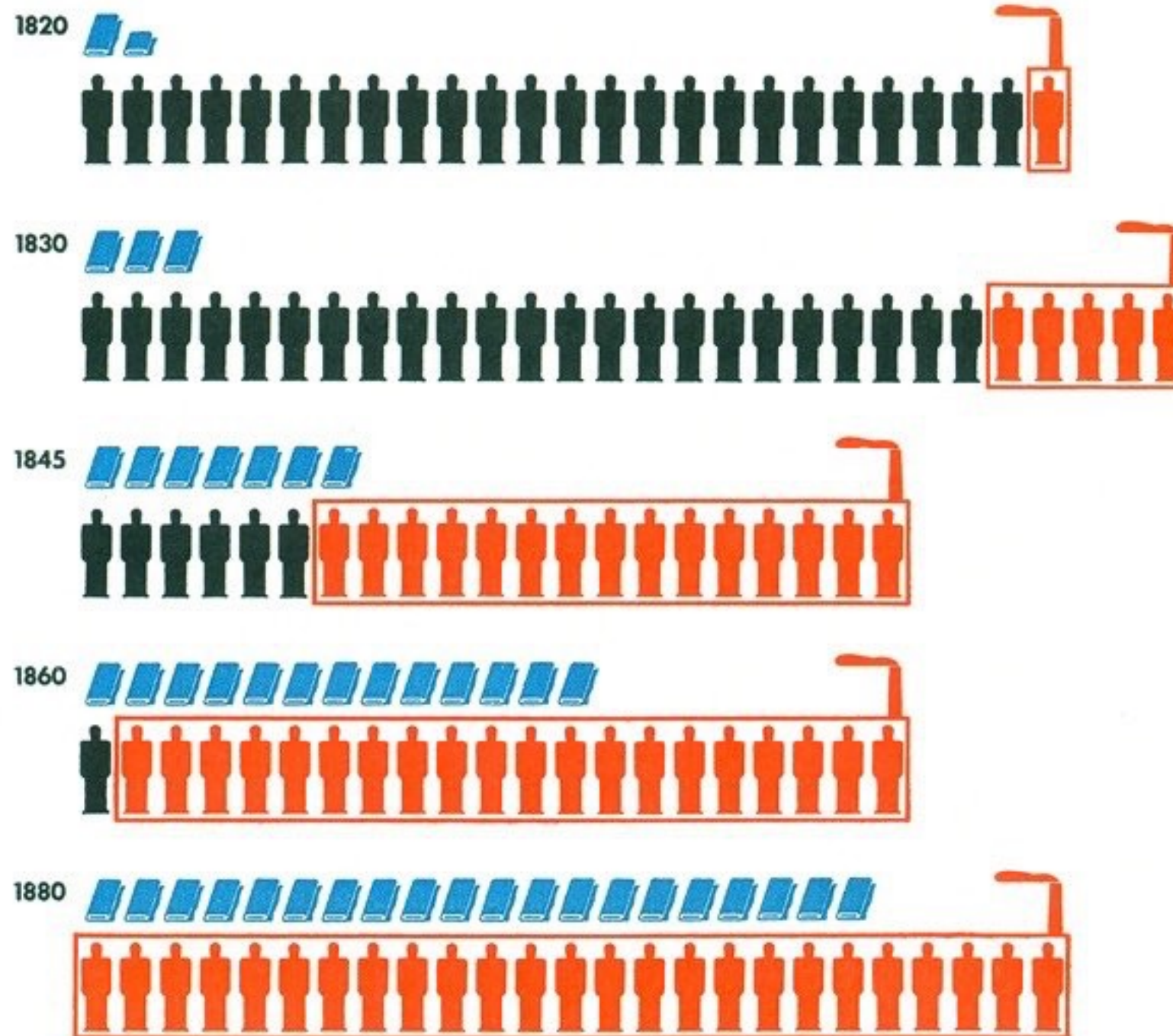
**well-known political
economist at the time.**

**He studied mathematics in
Vienna and gained his Ph.D.
in the department of
Political Science and
Statistics at the University
of Berlin.**

Neurath:

**it is better to remember
simplified pictures rather
than to forget accurate
figures**

Home and Factory Weaving in England



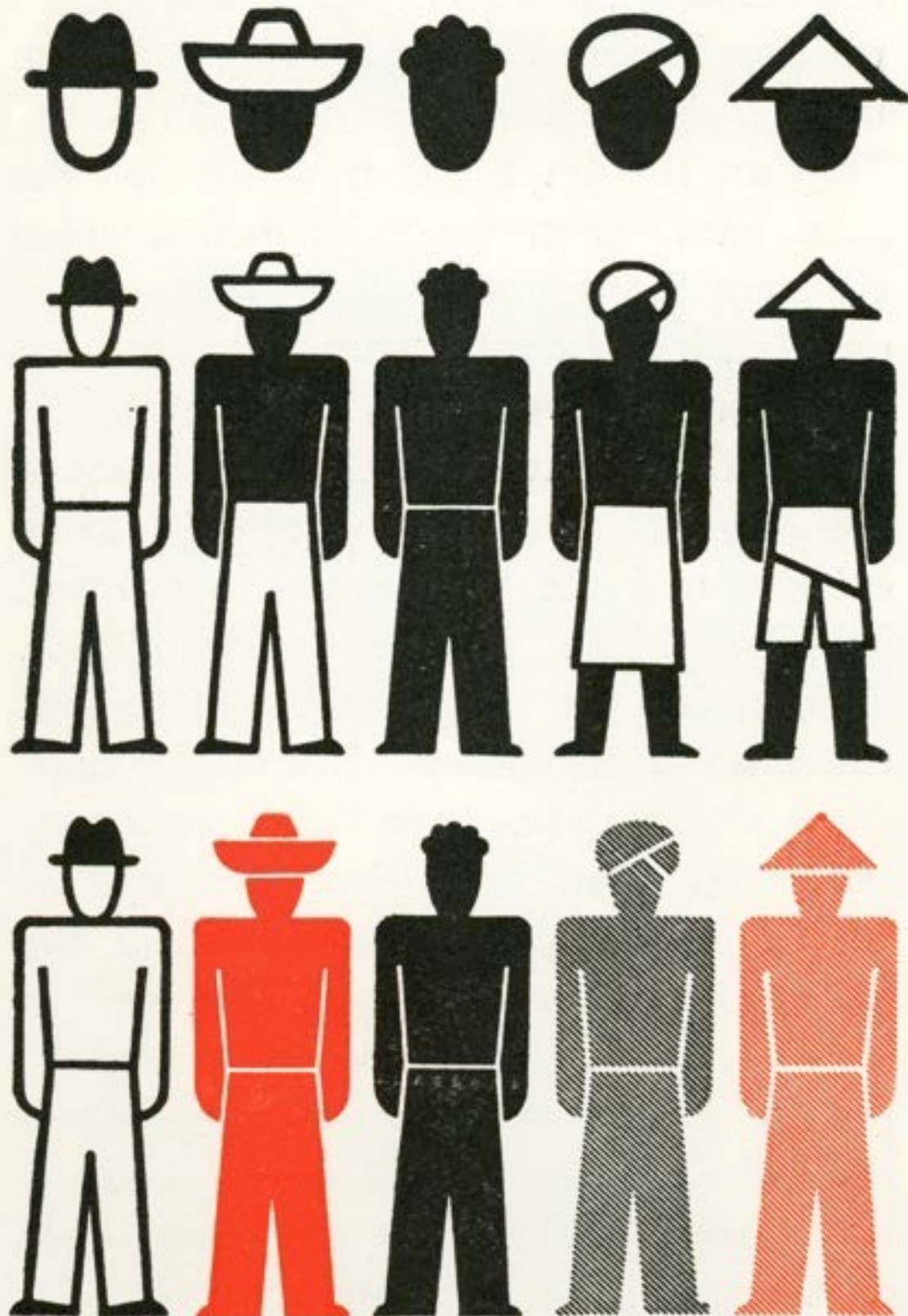
Each blue symbol represents 50 million pounds total production

Each black man symbol represents 10,000 home weavers

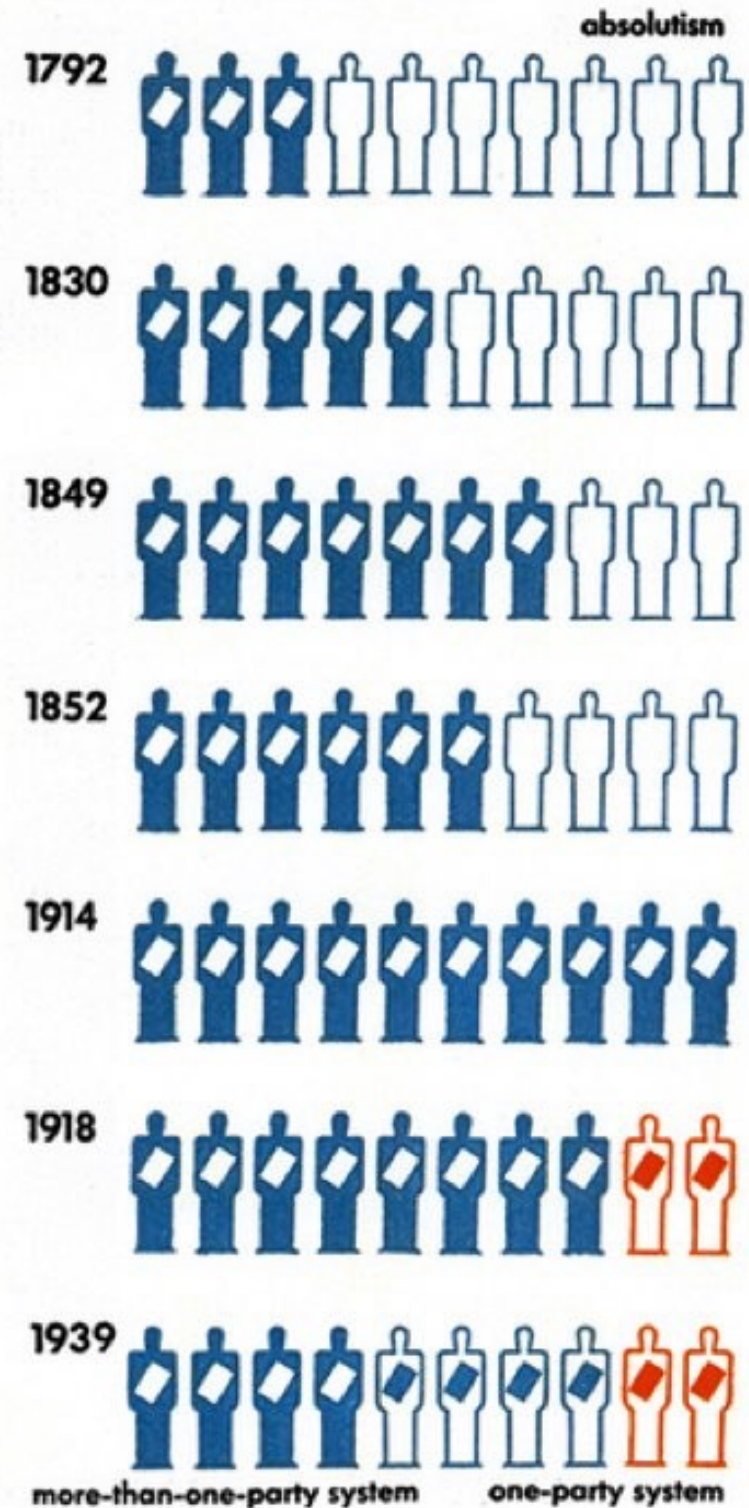
Each red man symbol represents 10,000 factory weavers

υφαντουργία (home)
vs
υφαντουργία (factories)

Signs for the 5 groups of men



Political Organization

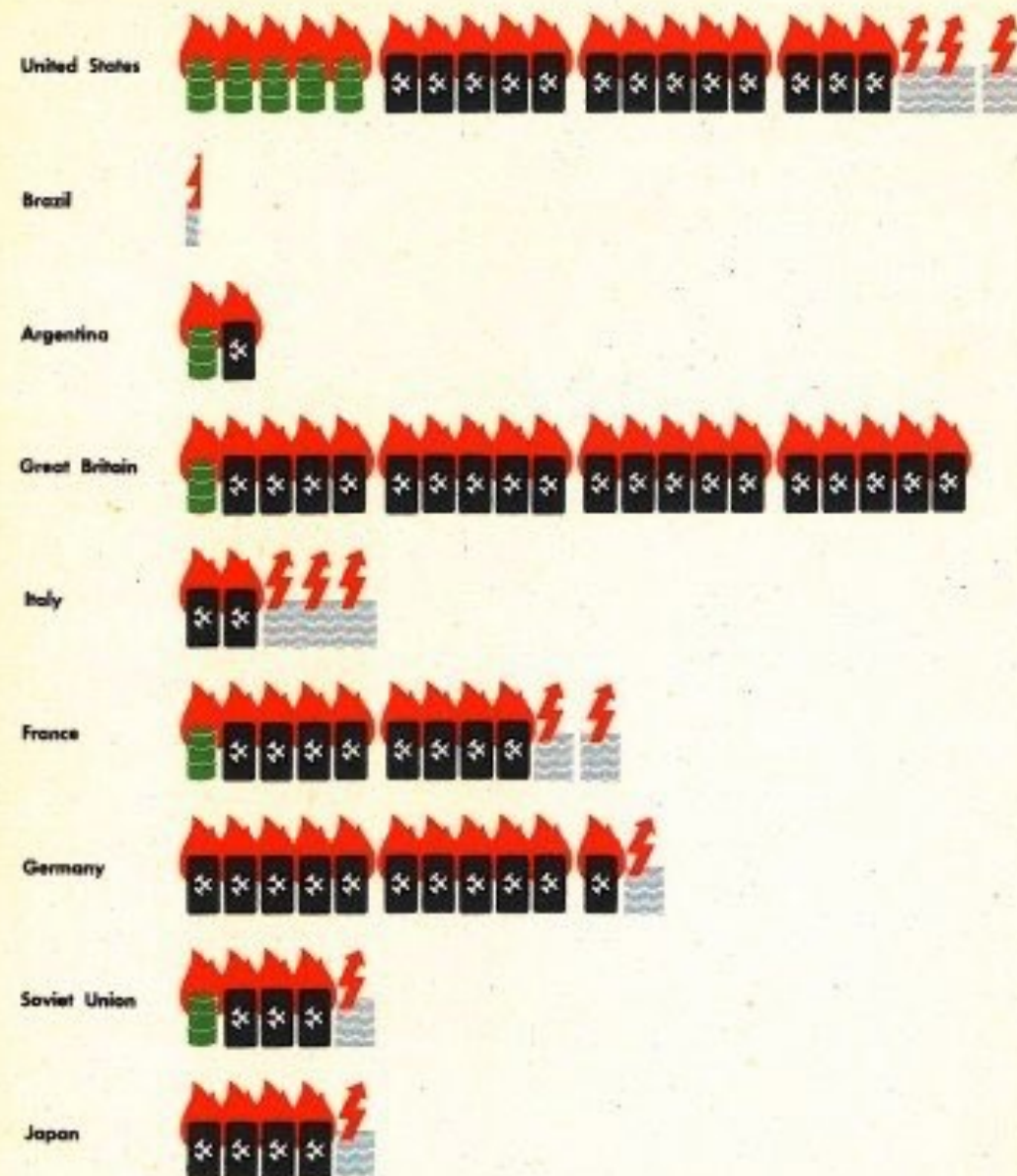


Each symbol represents
10% of the population of America, Europe, and the Soviet Union

Blue: people living under a "profit" system
without ballot paper: no suffrage
with white ballot paper: non-authoritarian states
with blue ballot paper: authoritarian states

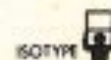
Red: people living under a "non-profit" system (the Soviet Union)

Power Used per Head, 1935



The units representing: 0.2 tons of oil consumed per head of population
 0.2 tons of coal consumed per head of population
 0.04 HP water power developed per head of population

Britain and America use more power per head than any other country. Britain leads in coal, U.S. in oil consumption. Germany has little natural oil; she uses synthetic petrol, but how much we don't know.

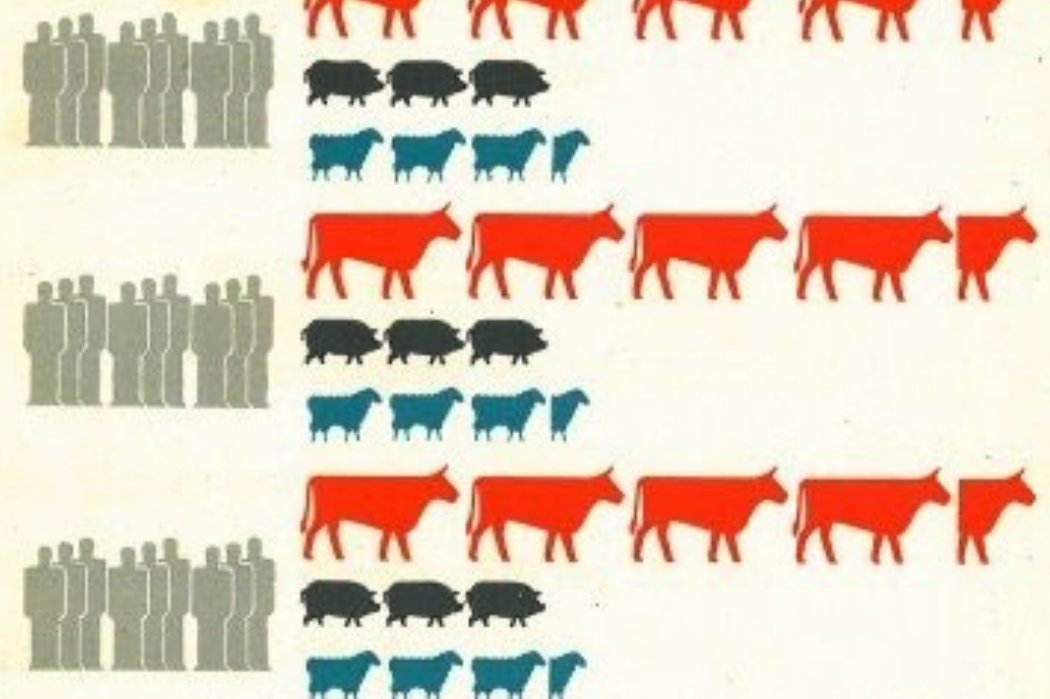


Population and Live Stock

Great Britain



United States



Each grey figure represents 5 million population
 Each complete red symbol represents 5 million cattle
 Each complete black symbol represents 5 million pigs
 Each complete blue symbol represents 5 million sheep

Average for 1935 - 1939

There are more cattle and pigs per head of population in America than Britain, but sheep—only 5 in U.S. for every 9 in Britain—are a different story, and provide the tender home-grown leg of mutton prized by the British.



**we have tremendous respect for
the work of the early Social
SenseMaking pioneers-among
them, the central figures of
Isotype Institute:**

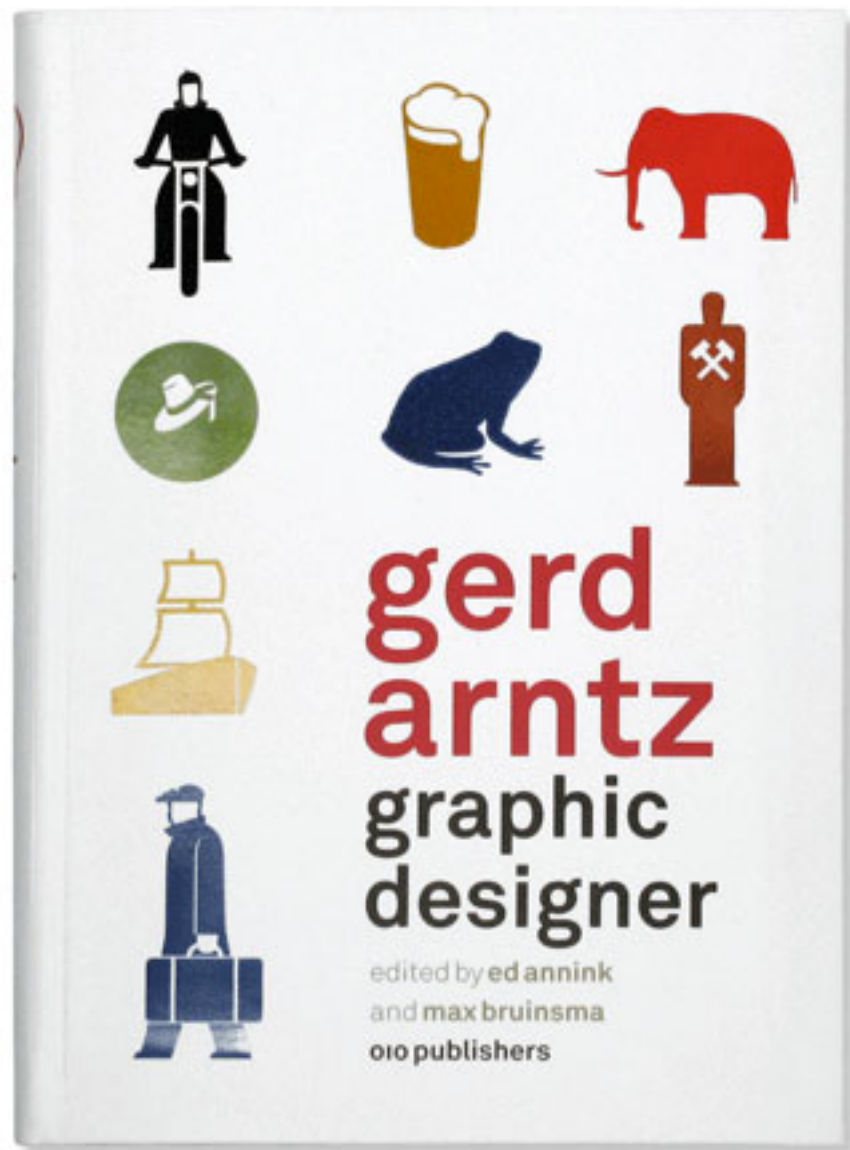
Otto Neurath (1882-1945)

Gerd Arntz (1900-1988)

Marie Neurath (1898-1986)

Gerd Arntz Graphic Designer : The Visual Legacy of 4,000 Symbols (1900-1988)

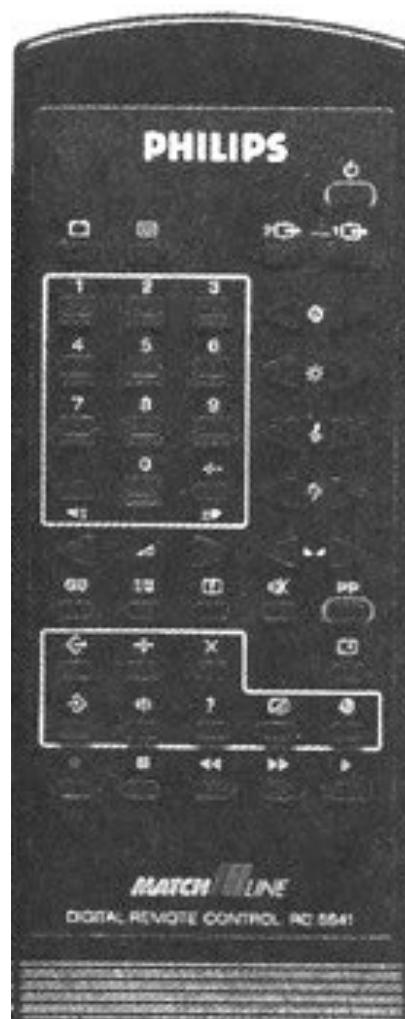
A politically engaged Modernist German graphic designer who collaborated with Neurath on the invention of Isotype.







περίπου την δεκαετία του 1970
τα pictograms άρχισαν να
εμφανίζονται σε ποικίλα
προϊόντα της βιομηχανίας.
Μέσα σε αυτά ήταν η Siemens,
η Philips, και η Toyota



Το Μάιο του 1993 ένας μεγάλος αριθμός pictograms έκαναν την εμφάνισή τους στο Αεροδρόμιο Schiphol





The beginning of signage + wayfinding (σήμανση) κατεύθυνση και πλοήγηση

εσωτερικοί και εξωτερικοί χώροι /
σύμβολα /

Schiphol Airport (1993)



 **Duivendrecht**
Diemen-Zuid III

Amsterdam 

Amsterdam-Zuidoost
 **Utrecht**
Amersfoort


DUIVENDRECHT

Brentwood
Chelmsford A12
Dartford Tunnel
Tilbury (A13)
Southend (A127)
Harwich (A604)



The City
(A11)

URBAN
CLEARWAY





**contemporary applications
in wayfinding & signage**

Student House designed by MISION (Swiss)



01 SYMBOL - Fasade



02 FASADESKILT, UTHENGSSKILT - Stedsnavn



03 PYLONER



04 VEIVISNING - Innendørs



05 IKONER - På glass og dører



06 DEKORFOLIERING - Innendørs







EXTERIOR

INTERIOR



Muzeum Śląskie design by Blank Studio (Poland)



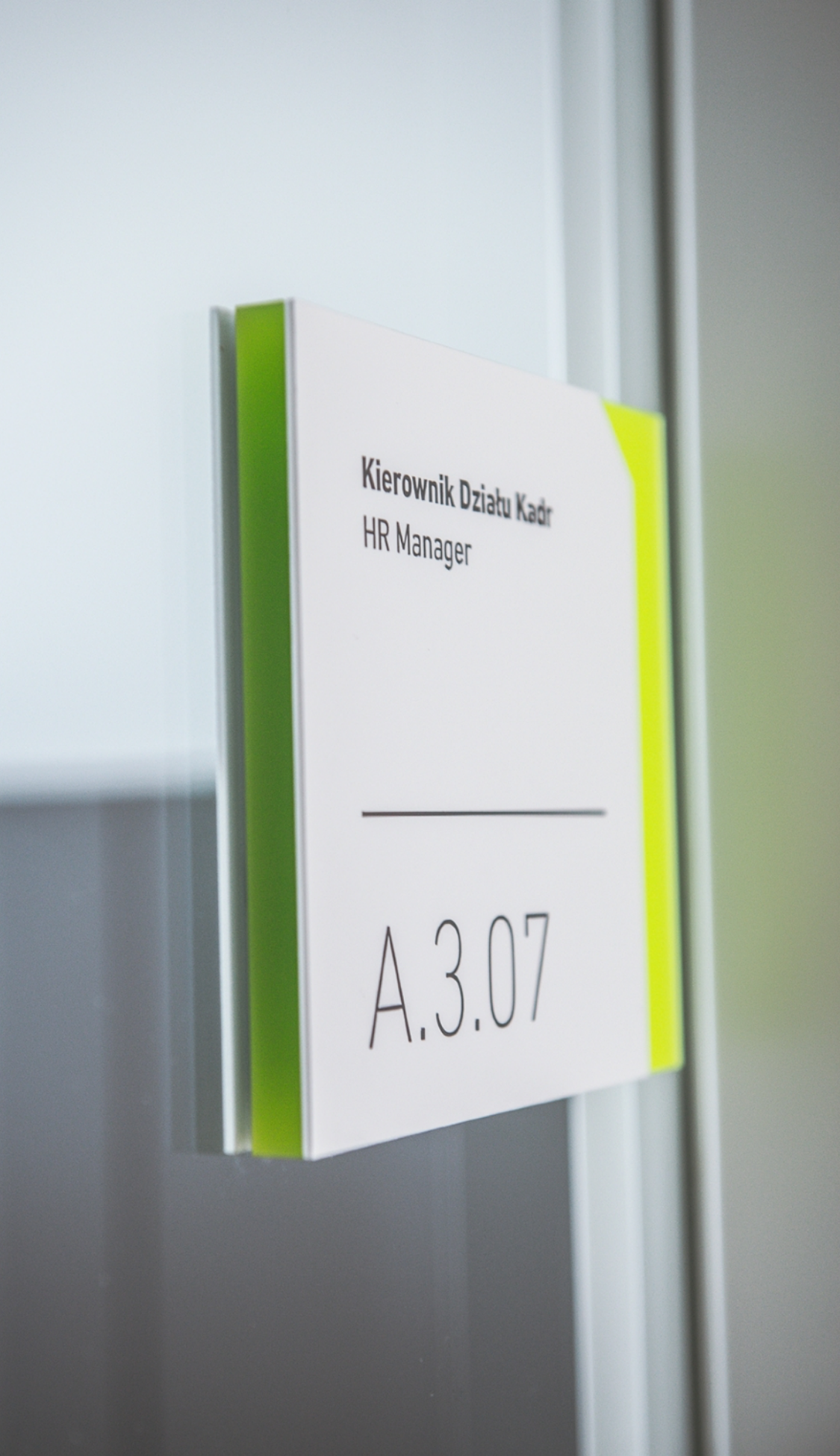


Audytorium
Auditorium









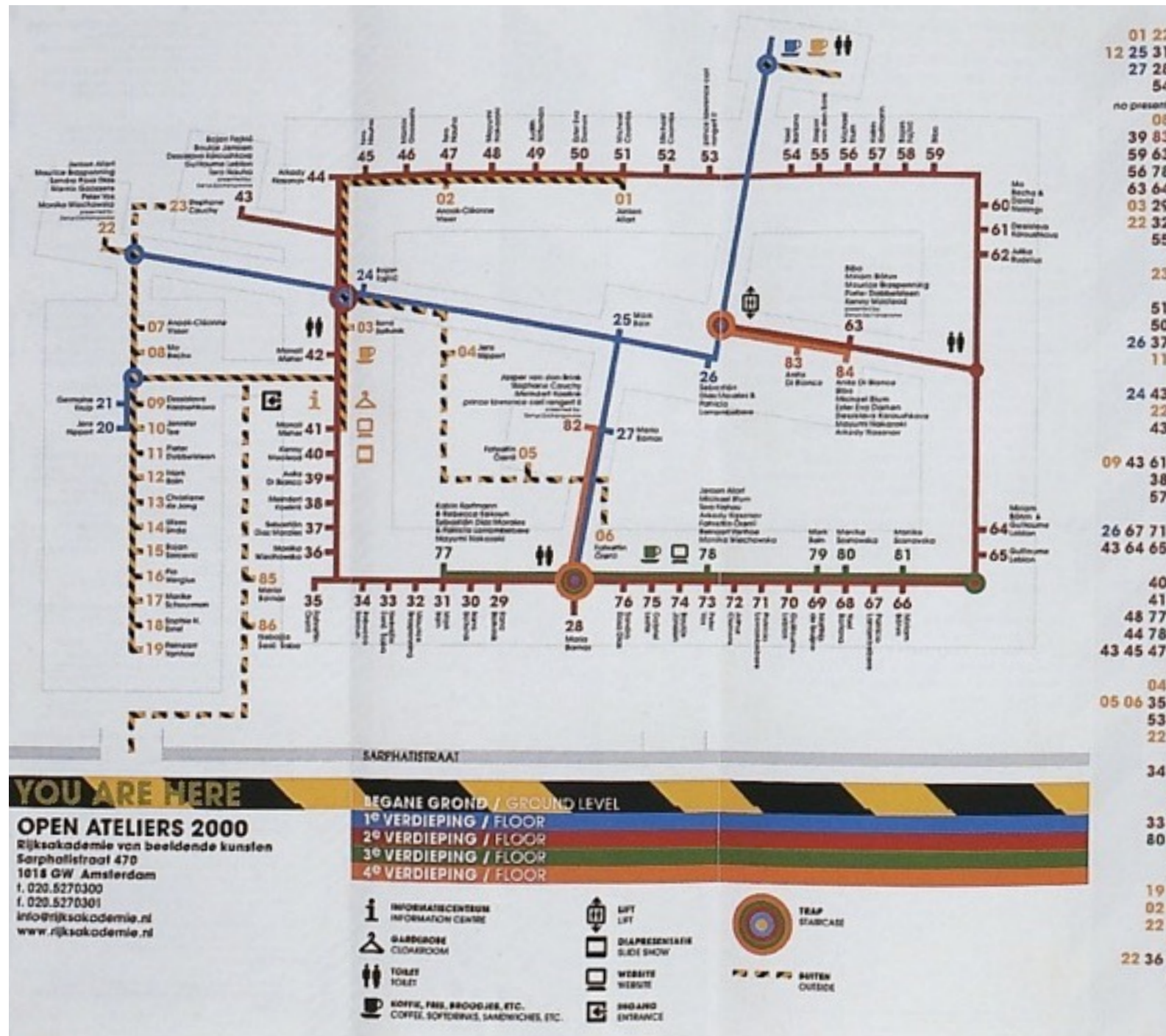






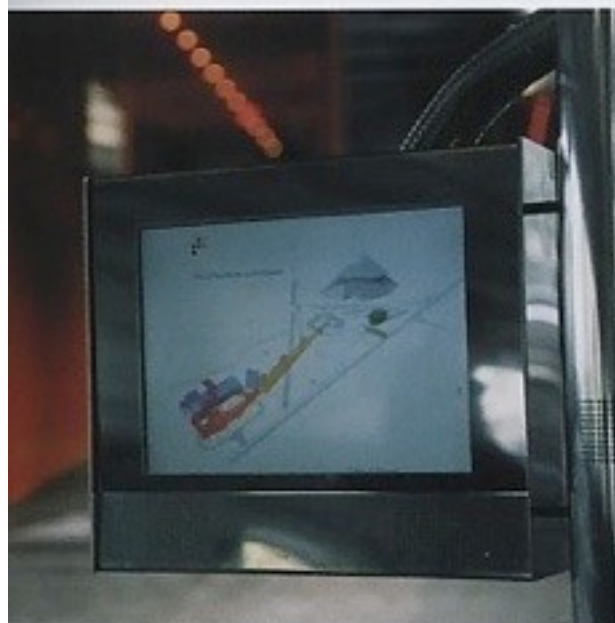
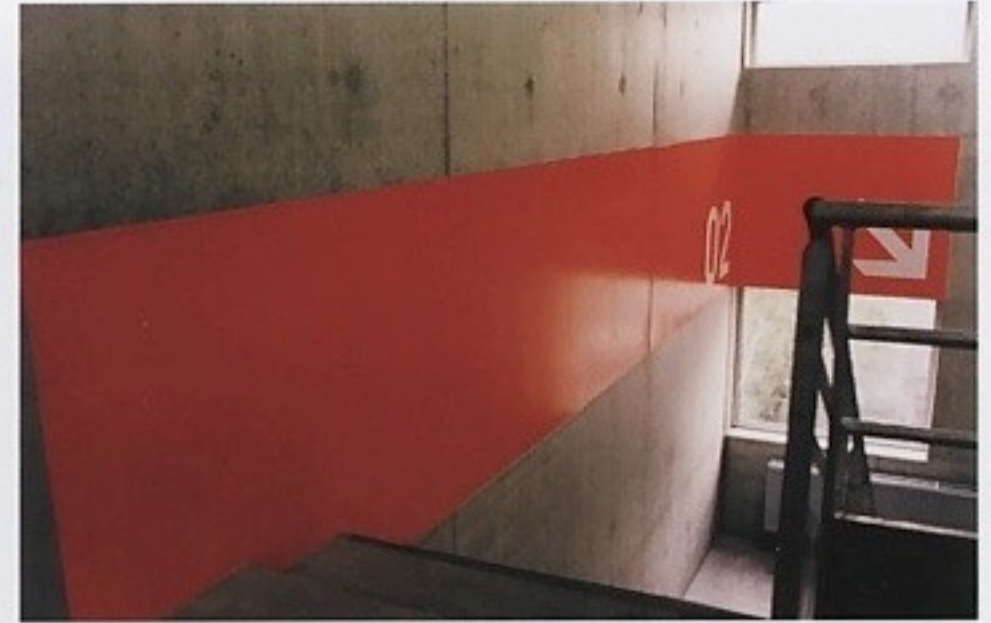
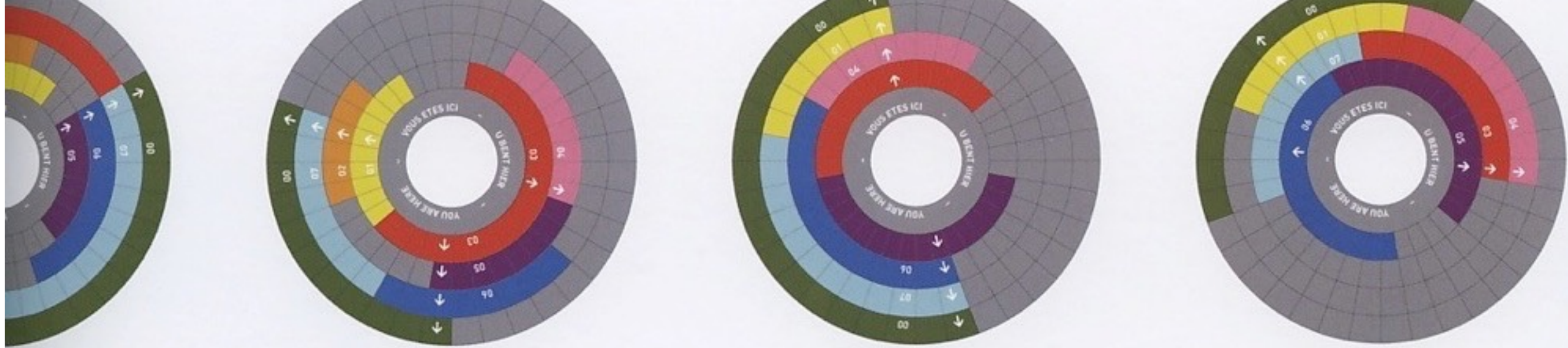
Open Ateliers design by Lust

Open Ateliers is an event where the public can visit the studios of the artists. The project was done because of the complex nature of the building and also because there was a complain from the previous years bad navigation of the public







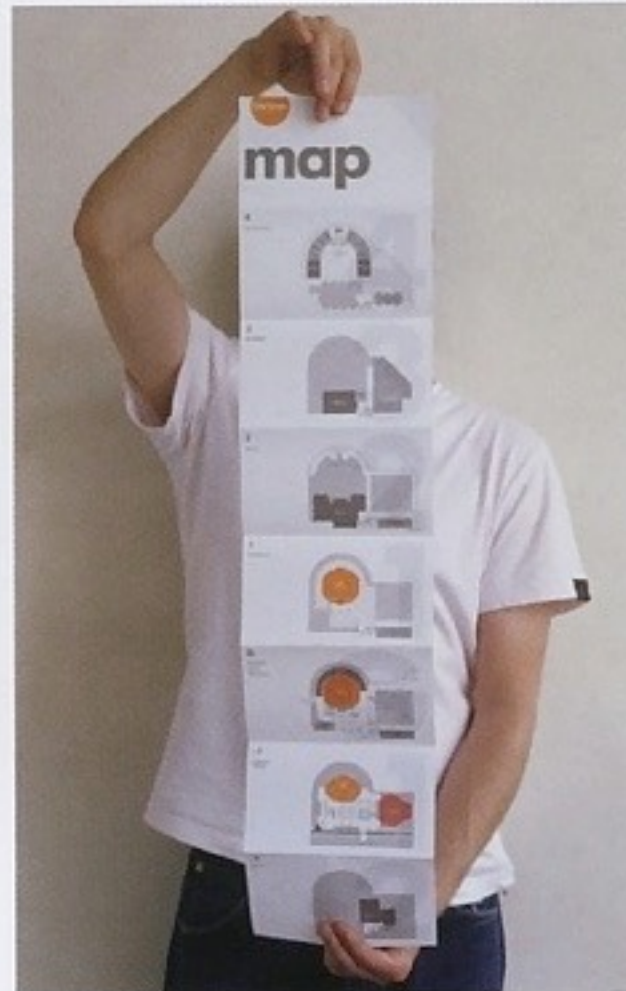


**Pass-Scientific Adventure Park
in Belgium**
design by Base



Barbican Center
design by Richard Learoyd & Tim Soar



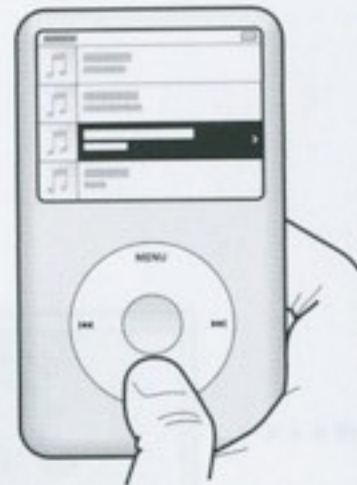


σχεδιασμός πληροφορίας και εικονογράφηση

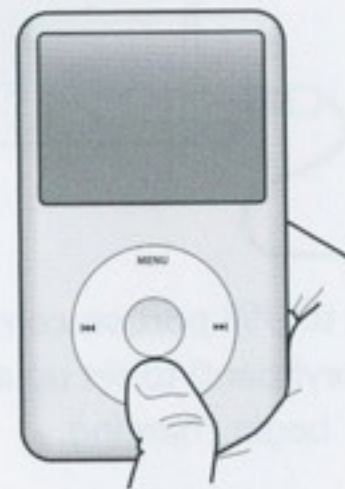
hybrid of diagrams and hyper-realistic illustrations
(manuals + instructional + educational infographics)



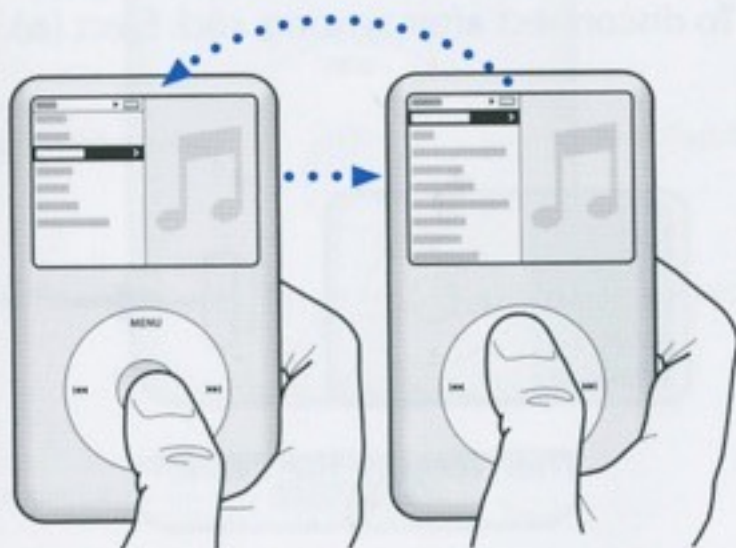
Browse items.



Play or pause
a song (▶||).

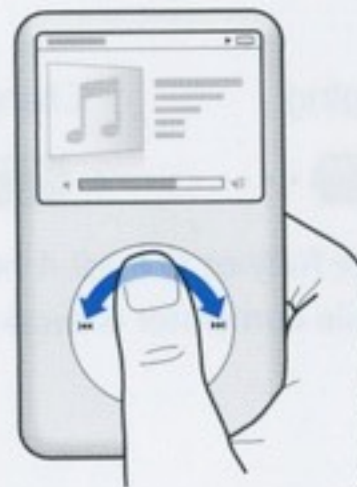


Press and hold ▶||
to turn off.

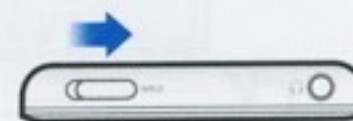


Choose an item.

Press Menu
to go back.



Adjust the volume.



Disable Click Wheel

Safety On Board



1386:24b

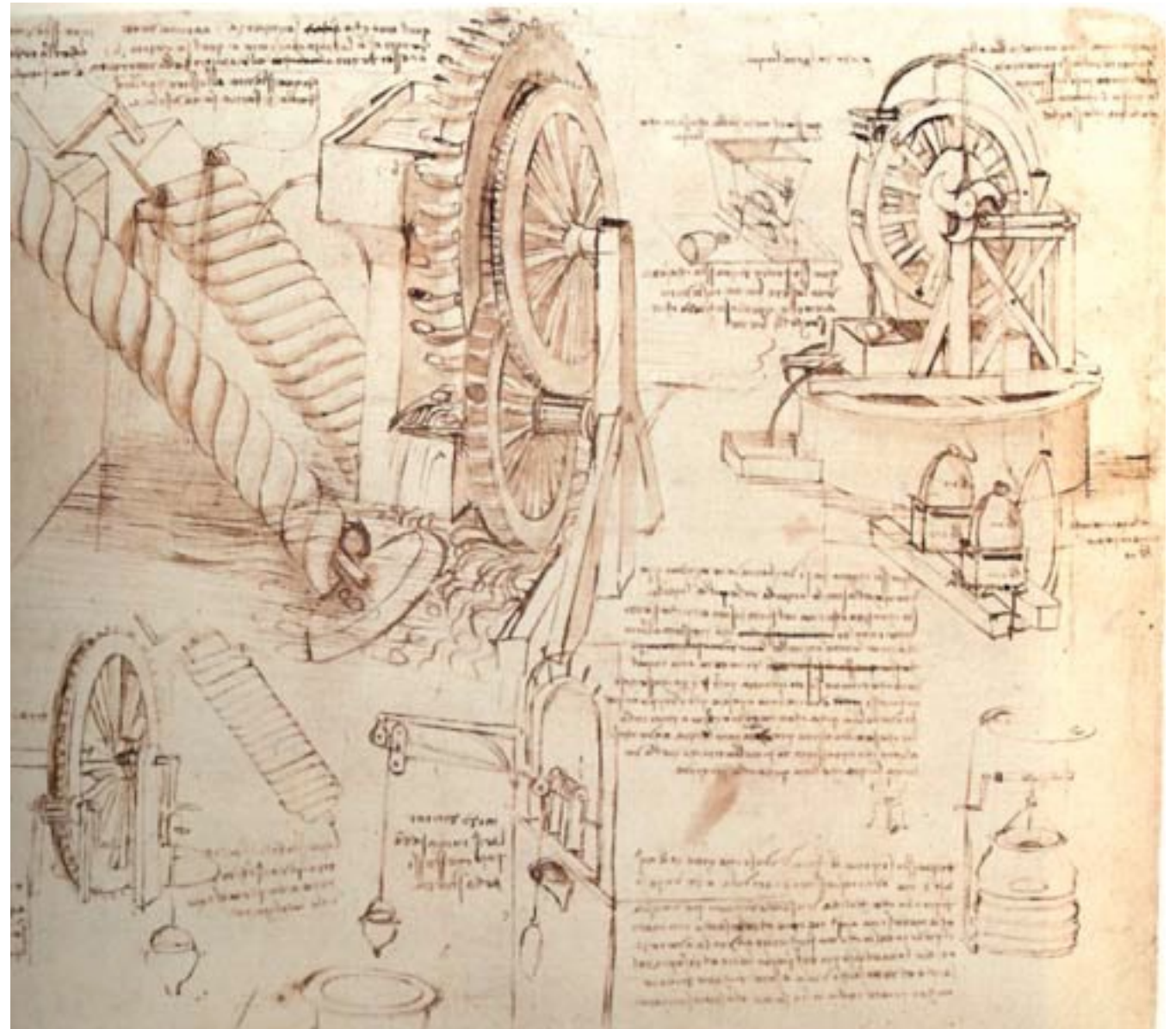
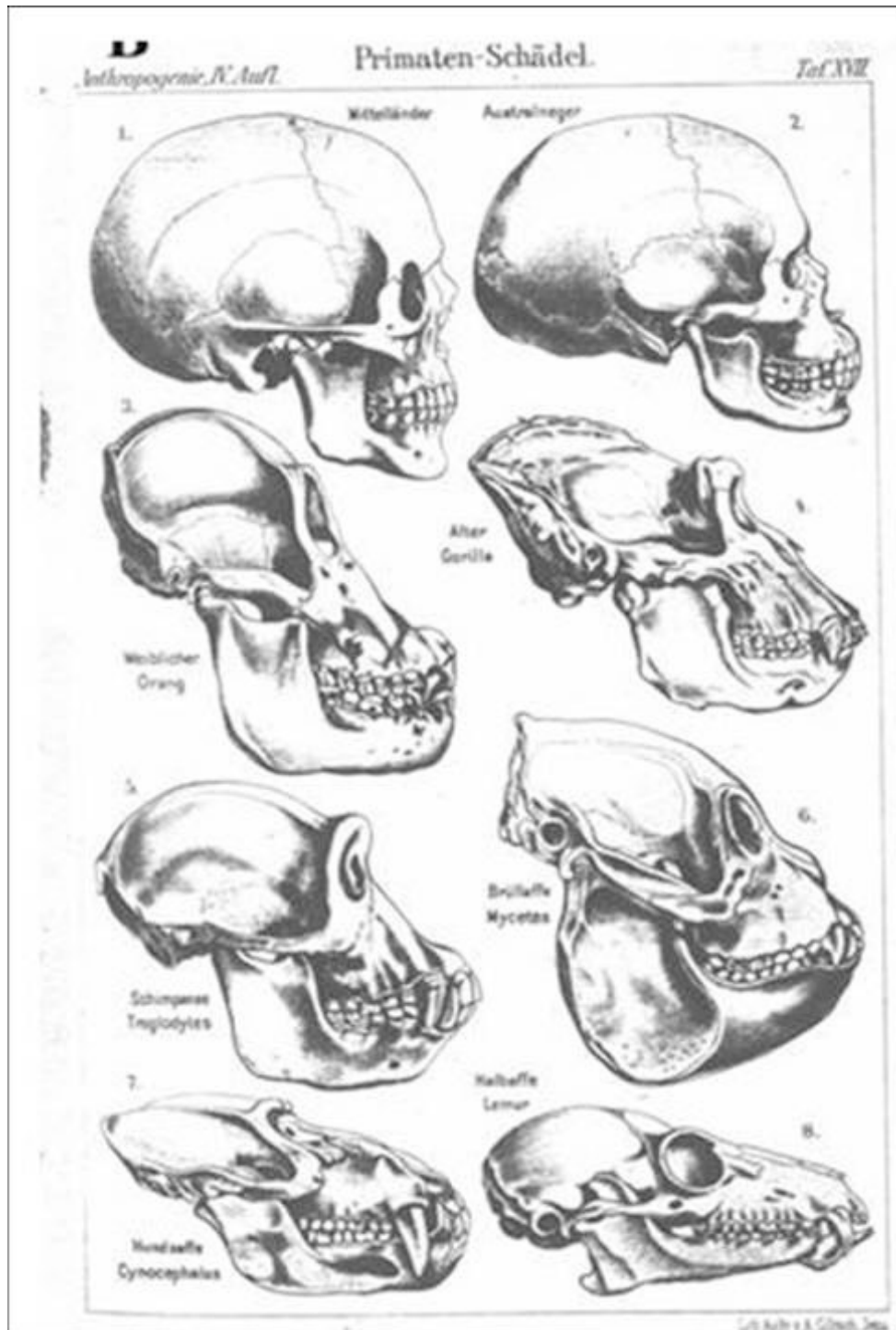


Safety On Board

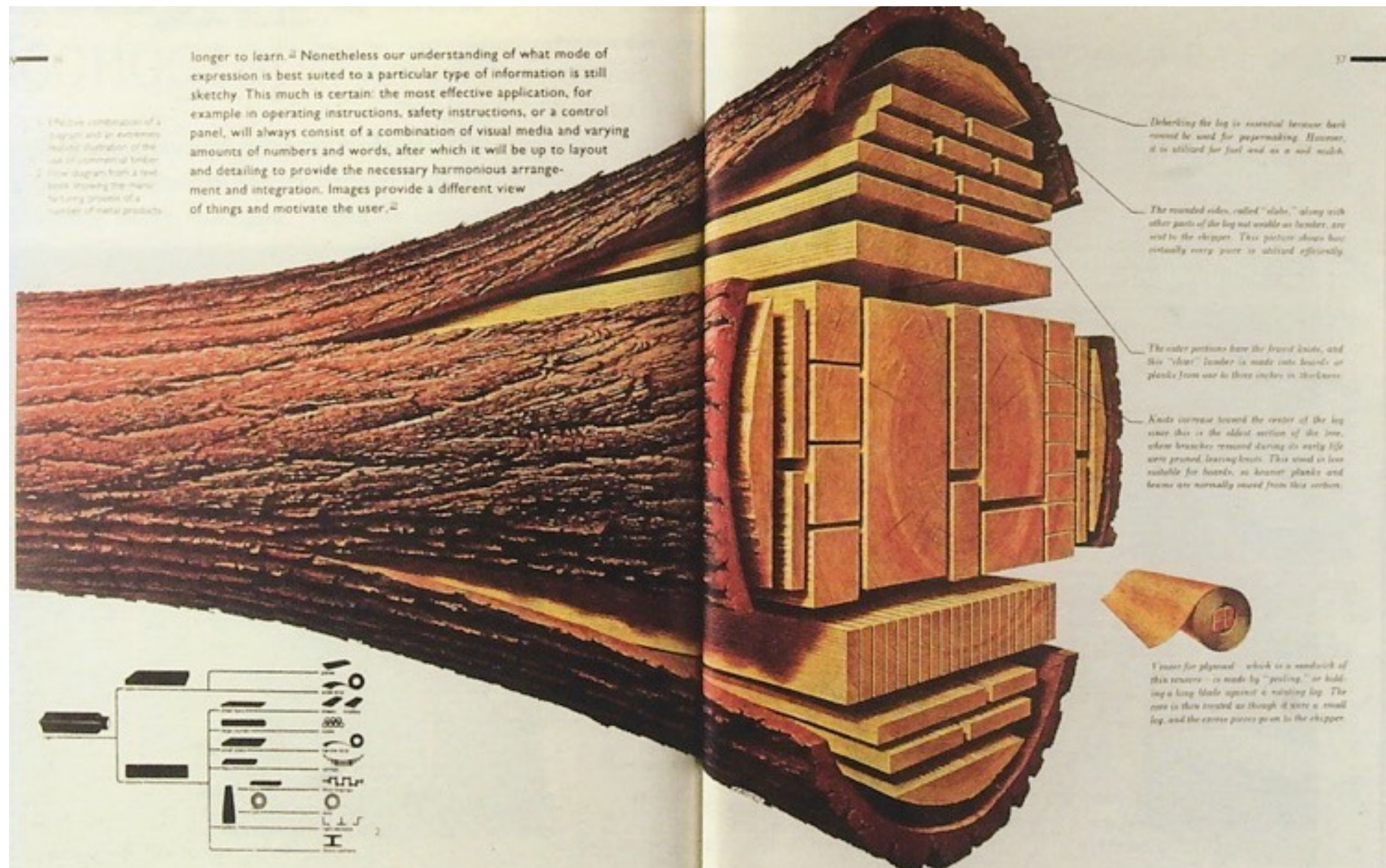


Ernst Haeckel's Evolution of Man (1903) comparison of the evolution between the "Australian Negro" skull and the "Mediterranean" skull

Leonardo Da Vinci, Drawings of water lifting devices (1480)



Hybrid of diagram and hyper-realistic illustration about the uses of cut timber, in "The secret of the Forest", 1970

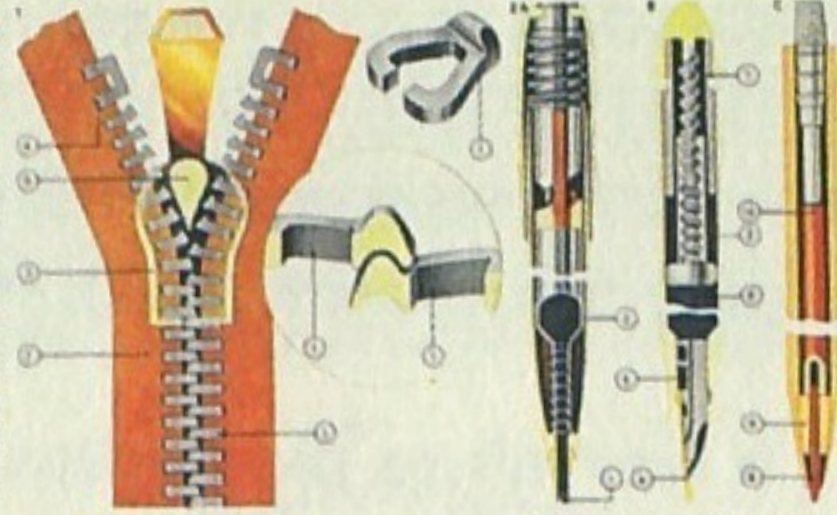


Everyday machines and mechanisms: 1

Most everyday products are used without any thought about the history of their invention or development. But modern life would be impossible without practical products such as zip fasteners [1], pens [2], door locks [3, 4], water taps [5], luxury cars [6], cigarette lighters [7], aerosols [8] and fire extinguishers [9].

Whitehead Johnson invented the zip fastener in 1893, although the first reliable model was not introduced until 1913 by Gideon Sundback (1869-1954). Before this, buttons were used, although they did not become common until the thirteenth century. L. F. Waterman (1837-1901) invented the modern fountain pen in 1884. In parallel with the ball-point pen and fibre tip pen have become more popular for everyday use.

Locks date back more than 4,000 years and were used by the ancient Egyptians. The lock most commonly used today is the Yale, named after its inventor, Linus Yale Jr (1821-88). The modern version has been adapted for many uses. Since the early 1950s it has been used for motorcars, planes, shipping crates and household cleaners.



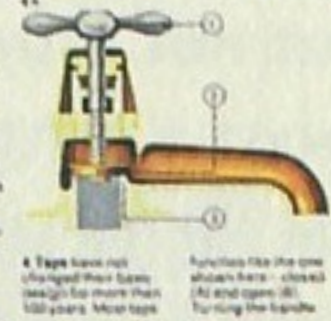
1 The zip fastener, designed as an improved method of fastening garments, comprises two chains of teeth [1] each secured to a length of strong fabric [2], a slide [3], a bottom and piece and two top and side coils.

[4], by moving the slide upwards, the teeth are gradually drawn together within the slide, interlocking as shown in the inset diagram. When the slide moves down, the teeth separate within it [5] and separate the cloth.

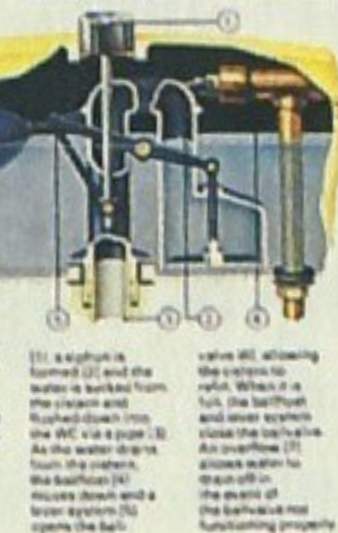
2 Pens are of two main types - ballpoint and fountain. Both pens [6], developed in 1938 by the Hungarian László and George Biro, have a ballpoint [7] at the tip of a tube of liquid ink [8]. Some fountain pens [9] are ballpoint [10] and have a ballpoint [11] at the tip of a tube of liquid ink [12].

pen [13] are ballpoint [14] and have a ballpoint [15] at the tip of a tube of liquid ink [16]. Some fountain pens [17] are ballpoint [18] and have a ballpoint [19] at the tip of a tube of liquid ink [20].

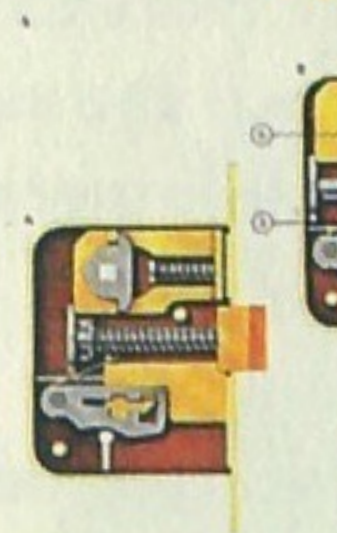
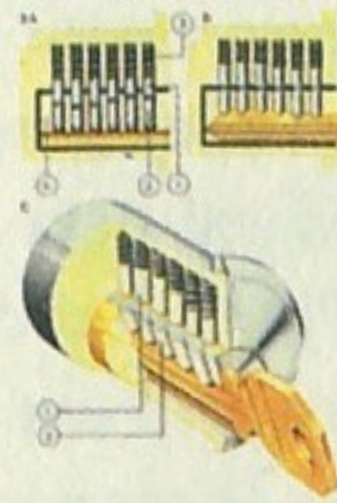
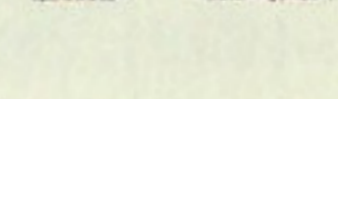
3 The modern Yale lock [21], invented by Linus Yale Jr in 1860, operates on a principle similar to that of a door lock. In the Yale, several two-section pins [22] of different lengths are forced downwards by a spring [23] into holes in a rotating plug or cylinder [24]. When the cylinder [25] is turned, the pins are aligned between the plug and body [26] turning the plug [27].



4 Type lever lock [28] changed their basic design for more than 100 years. More types [29] function like the one shown here - closed [30] and open [31]. Turning the handle [32] causes the wedge [33] to be moved upwards away from the valve seat [34].



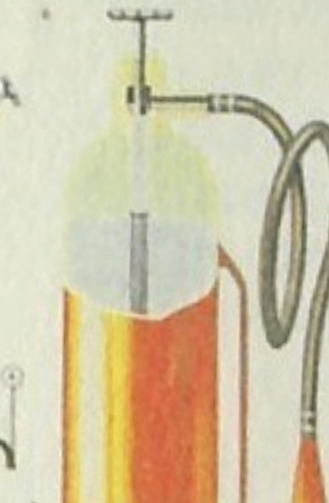
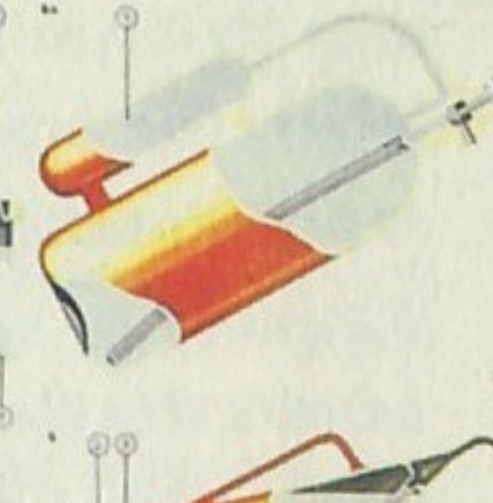
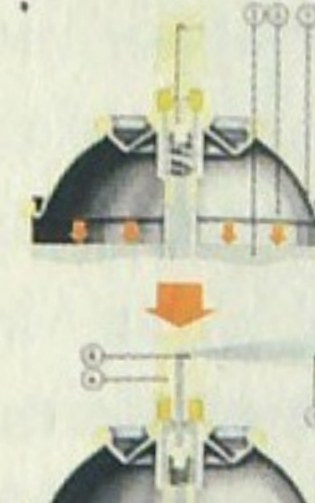
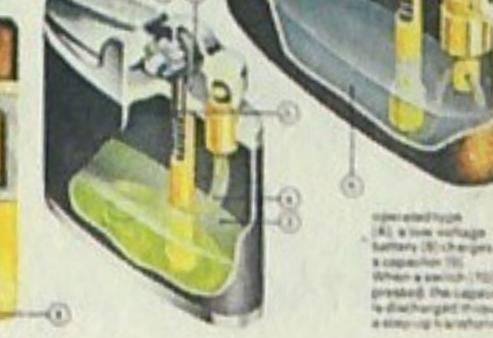
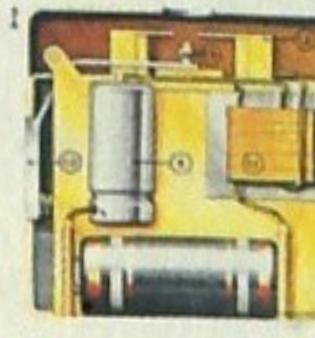
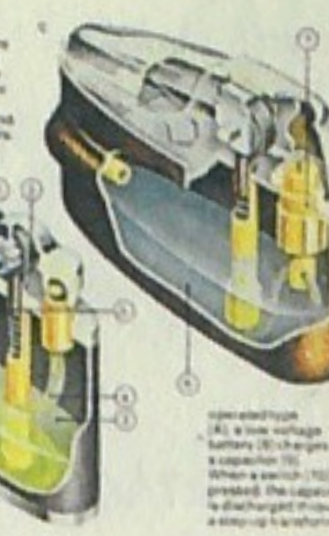
5 Lever tumbler lock [35] came back in the 19th century. Now commonly used in commercial buildings [36], these most important components [37] is the tumbler [38], a single lever that is securely held in the lock [39] by a spring [40]. A projection on the tumbler, or stop [41], prevents the bolt from moving back. A key is inserted, it engages the tumbler and is shaped so that it pushes the tumbler upwards [42] by the right amount, the key is then able to turn enough to engage the bolt at a point and move it back into the lock. Turning the door handle then makes the bolt [43] move the latch [44] across. For extra security, a series of different tumblers can be used, each with its own key [45].



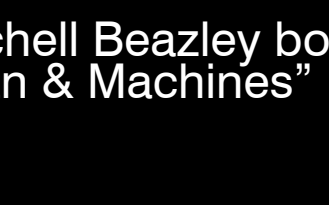
7 Cigarette lighters first appeared in 1929 when first-wheel lighters with a wheel [46] were used. Auermetal, an alloy of iron and magnesium, was invented by Baron Adolf von Weizsäcker (1868-1929). In a modern flint [47], a flint [48] turns the first wheel [49].

petrol lighter [50], a flint [51] turns the first wheel [52]. Petrol [53], generally in a wick [54], is drawn up the wick [55] and ignited by a spark from the flint [56].

that the petrol and wick are replaced by liquid gas [57] and a valve [58]. There are two types of electronic cigarette lighters. Battery-operated and piezoelectric models in the battery.



8 Aerosols were patented by L. D. Goodhue and W. N. Burton in the USA in 1941 and the aerosol spray has been in widespread use since the early 1950s. First, the can [59] is filled with the product to be sprayed [60] and the propellant [61]. When the push button [62] is pressed, the product is forced up the dip tube [63] and out of the nozzle [64] as a fine spray [65]. Fresh air is then drawn in, although it may be a pollutant and even a health hazard for a battery-operated alternative.



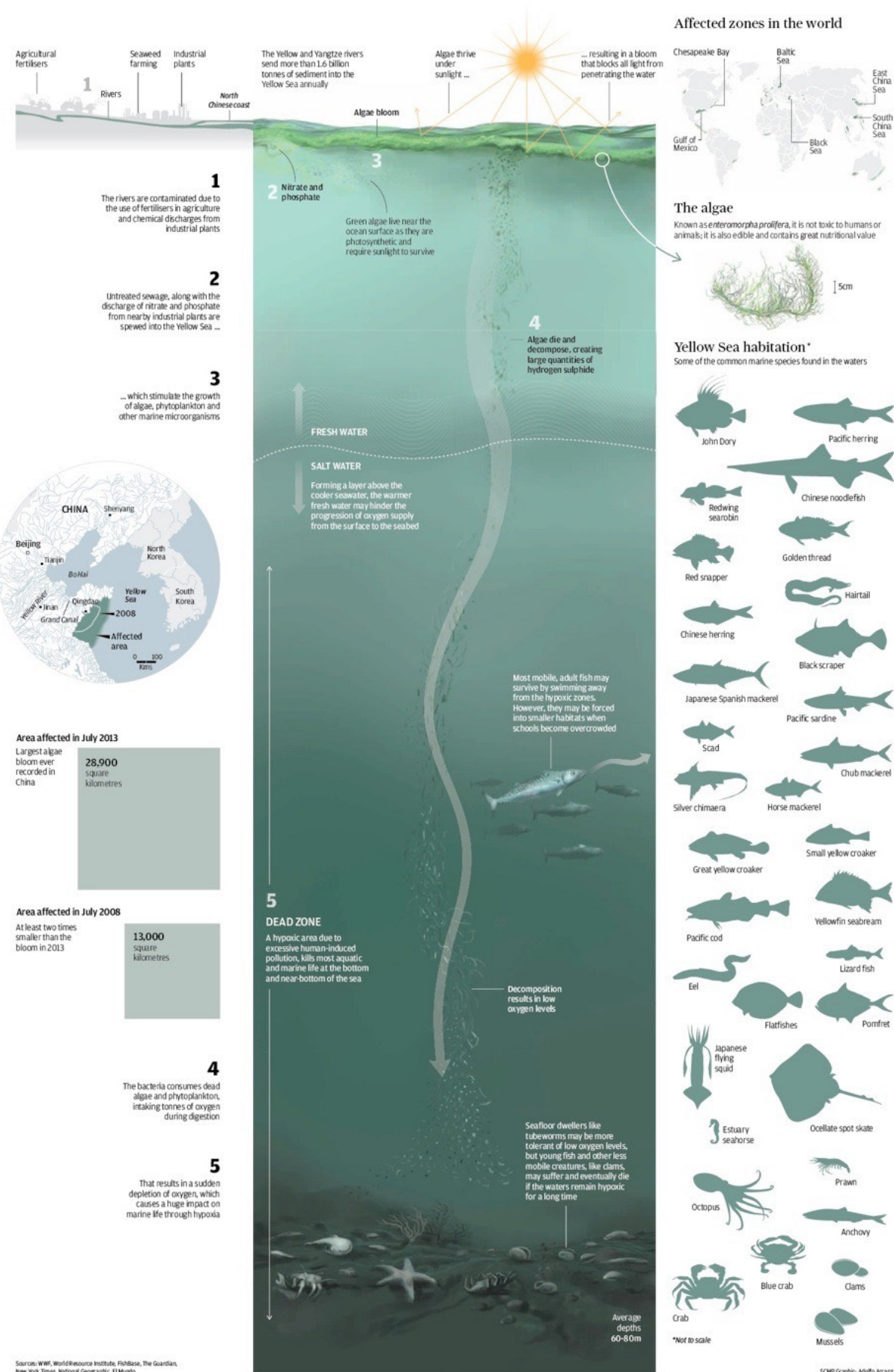
Mitchell Beazley book "Man & Machines"



illustration for a National Geographic magazine article about tropical rain forests

The dead zone

An outbreak of green algae, or hutai as the Chinese call it, has invaded the seawaters off eastern Shandong. It looks harmless and lots of fun, as beachgoers are pictured frolicking in the green mass. But danger lurks below, with the algae posing a massive threat to aquatic life. Here we examine what lies beyond the layers of tangled seaweed.

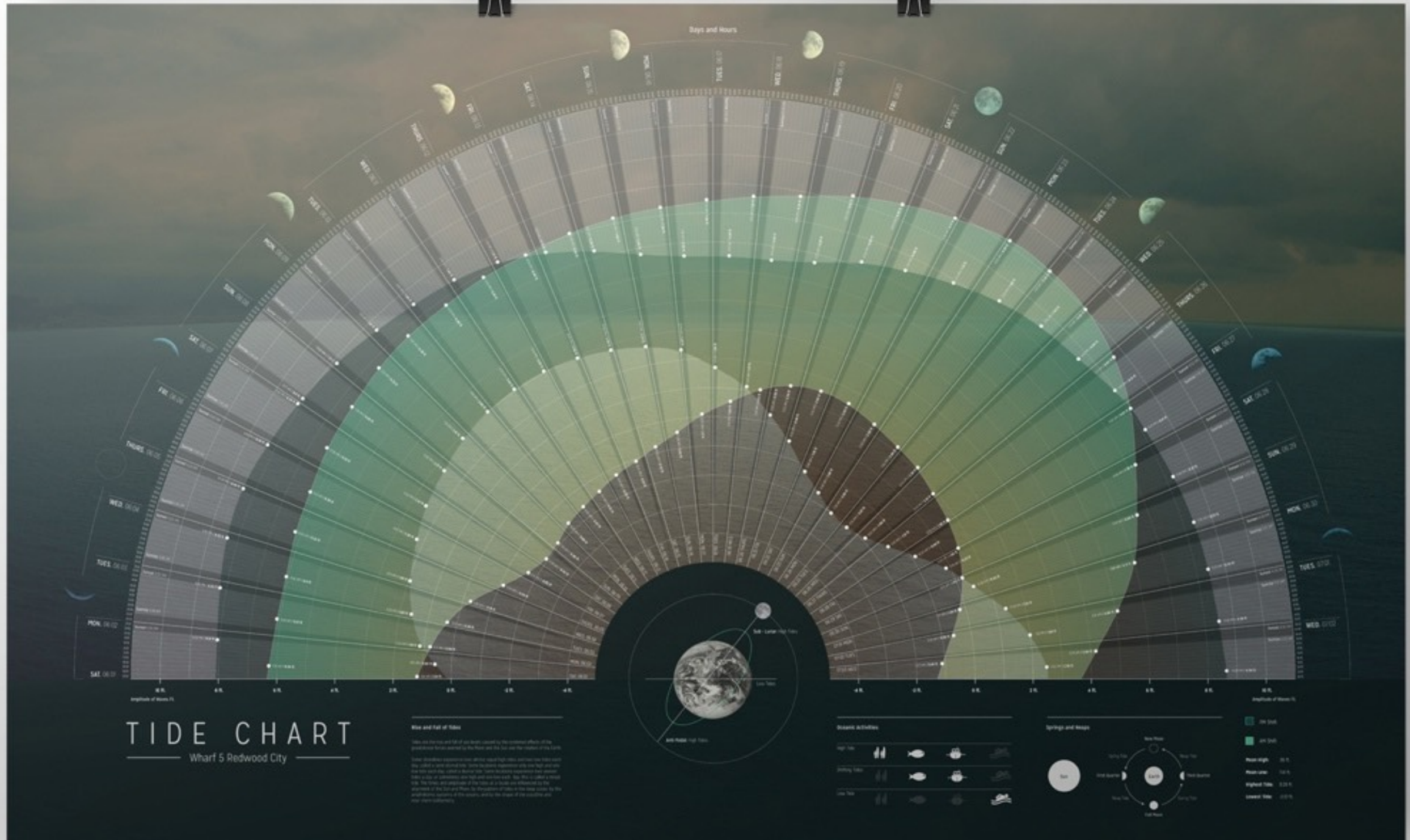


The dead zone,
Adolfo Arranz

The graphic examines the
dangers beyond the layer of
the poisonous seaweed

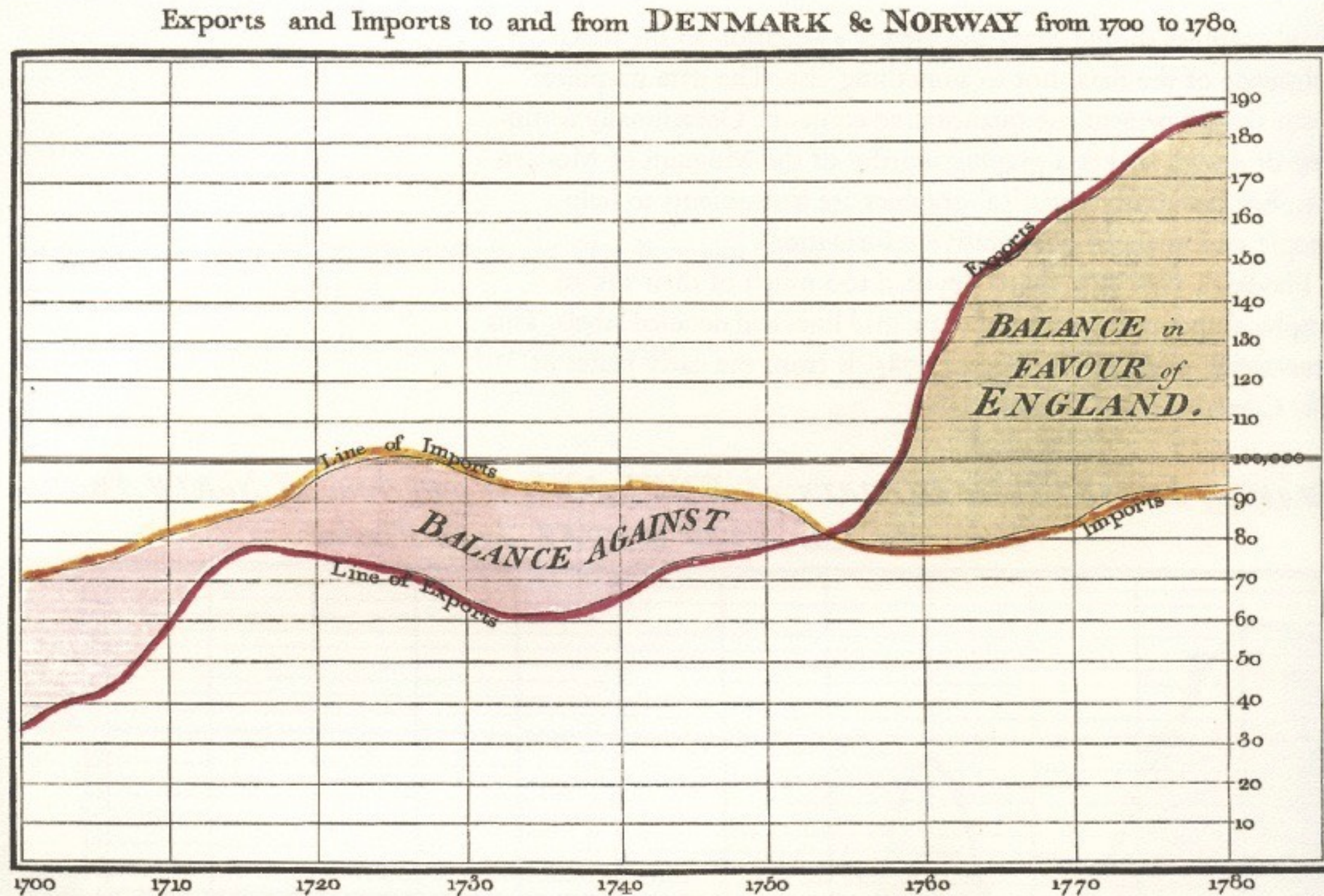
data visualisation (οπτικοποίηση δεδομένων)

σύγκριση / στατιστική και ανάλυση δεδομένων /
οπτικοποίηση πολλαπλών μεταβλητών /



William Playfair

Graph depicting imports & exports between Denmark and Norway (1780) - How do they compare in favor of England



The Bottom line is divided into Years, the Right hand line into £10,000 each.

Published as the Act directs 1st May 1786. by W^m Playfair

**Ο Σκοτσέζος, οικονομικός
συντάκτης και μηχανικός
δημιούργησε τέσσερις τύπους
γραφικών charts που
χρησιμοποιούνται μέχρι σήμερα:**

**line graphs, bar charts, pie
charts, circle graphs.**

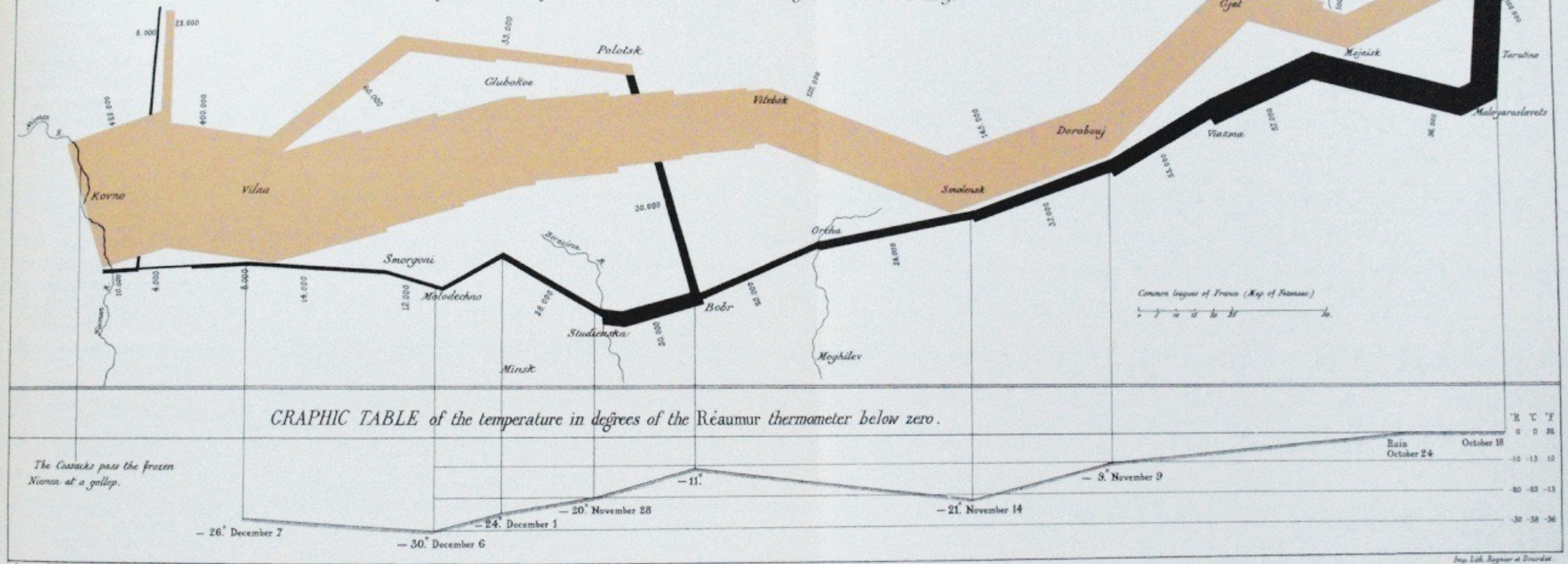
Charles Joseph Minard (1781-1870)

Statistical Graphic Depicting Napoleon's disastrous campaign (1812-1813)

Figurative Map of the successive losses in men of the French Army in the Russian campaign 1812-1813.
Drawn up by M. Minard, Inspector General of Bridges and Roads in retirement.

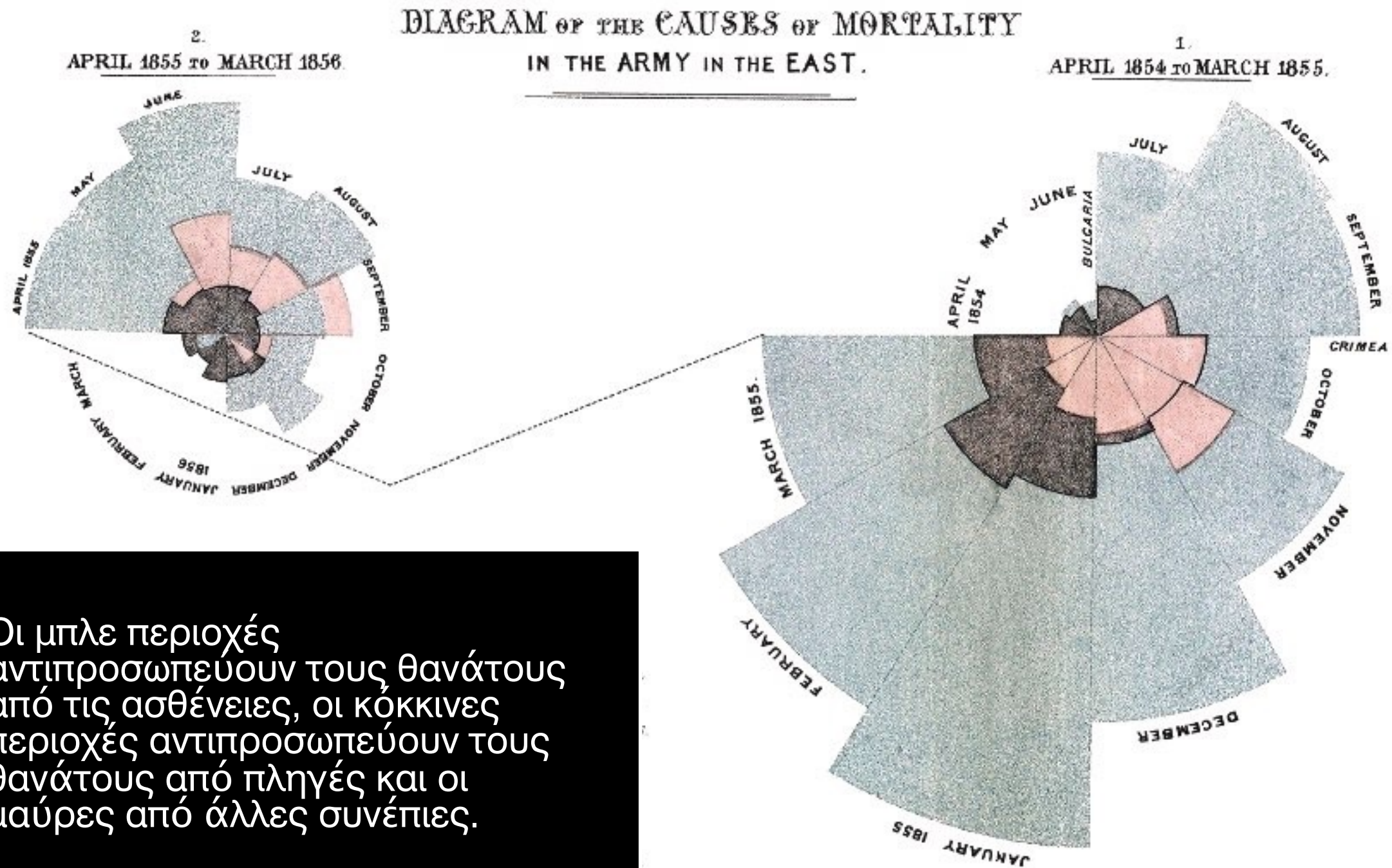
Paris, November 20, 1869.

The numbers of men present are represented by the widths of the colored zones at a rate of one millimeter for every ten thousand men; they are further written across the zones. The red designates the men who enter into Russia, the black those who leave it. — The information which has served to draw up the map has been extracted from the works of M. Thiers, of Ségur, of Fezensac, of Chambray and the unpublished diary of Jacob, pharmacist of the Army since October 28th. In order to better judge with the eye the diminution of the army, I have assumed that the troops of Prince Jérôme and of Marshal Davoust who had been detached at Minsk and Moghilev and have rejoined around Ocha and Vitebsk, had always marched with the army.



Florence Nightingale (1820-1910)

Polar Graph during
Crimean War
(1854-55)

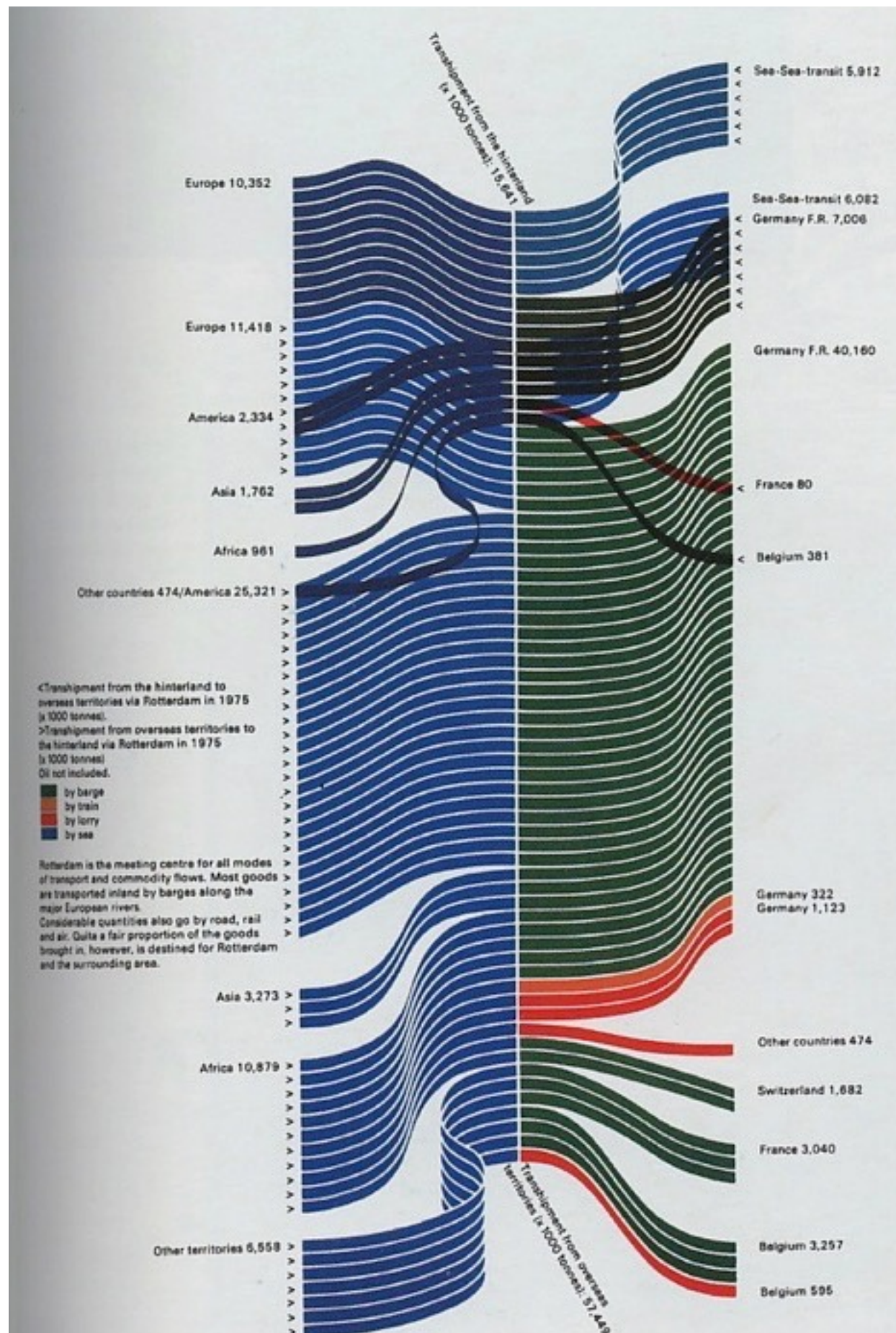


Benno Wissing and John Stegmeyer, 1975

Rotterdam at the center of international trade.

The colours denote transport networks:

blue for sea,
green for river,
orange for rail
and red for road



**Ζούμε στην εποχή που κάθε μέρα,
κάθε λεπτό και δευτερόλεπτο
βομβαρδιζόμαστε από πληροφορίες
και δεδομένα μέσω διαδικτύου,
τηλεόρασης, και μέσω κινητών
τηλεφώνων.**

**Ο κόσμος, καθώς επίσης και οι
πληροφορίες που έρχονται εις
γνώση μας, έχουν γίνει περίπλοκες.**

**Οι απλές γραφικές παραστάσεις και
τα διαγράμματα είναι πολύ
απλοποιημένα για να μπορούν να
αποτυπώσουν οπτικά αυτήν την
περιπλοκότητα.**

**alternative
contemporary applications**

**master you content and form will
rise to meet you!**



TIDE CHART

Wharf 5 Redwood City

Tide and Fall of Tides

Tides are the rise and fall of sea levels caused by the combined effects of the gravitational forces exerted by the Moon and the Sun and the rotation of the Earth.

Tides are caused by the gravitational pull of the Moon and the Sun. The Moon's pull is the primary cause of tides, while the Sun's pull is a secondary cause. The combination of the two pulls results in the tides we experience. The tide level is highest when the Moon and the Sun are in the same line (new moon or full moon) and lowest when they are at right angles to each other (first and third quarters).

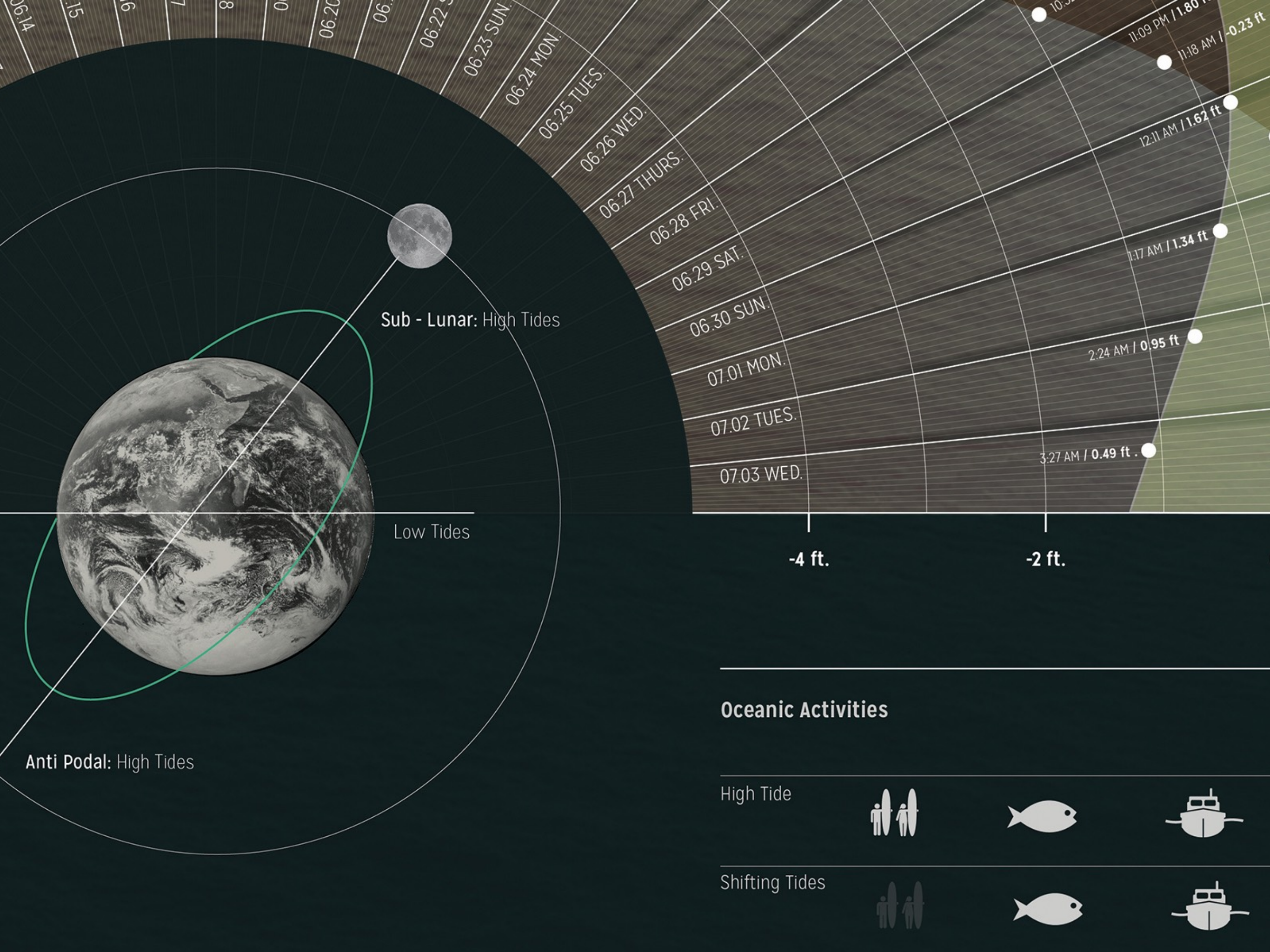
Aquatic Activities

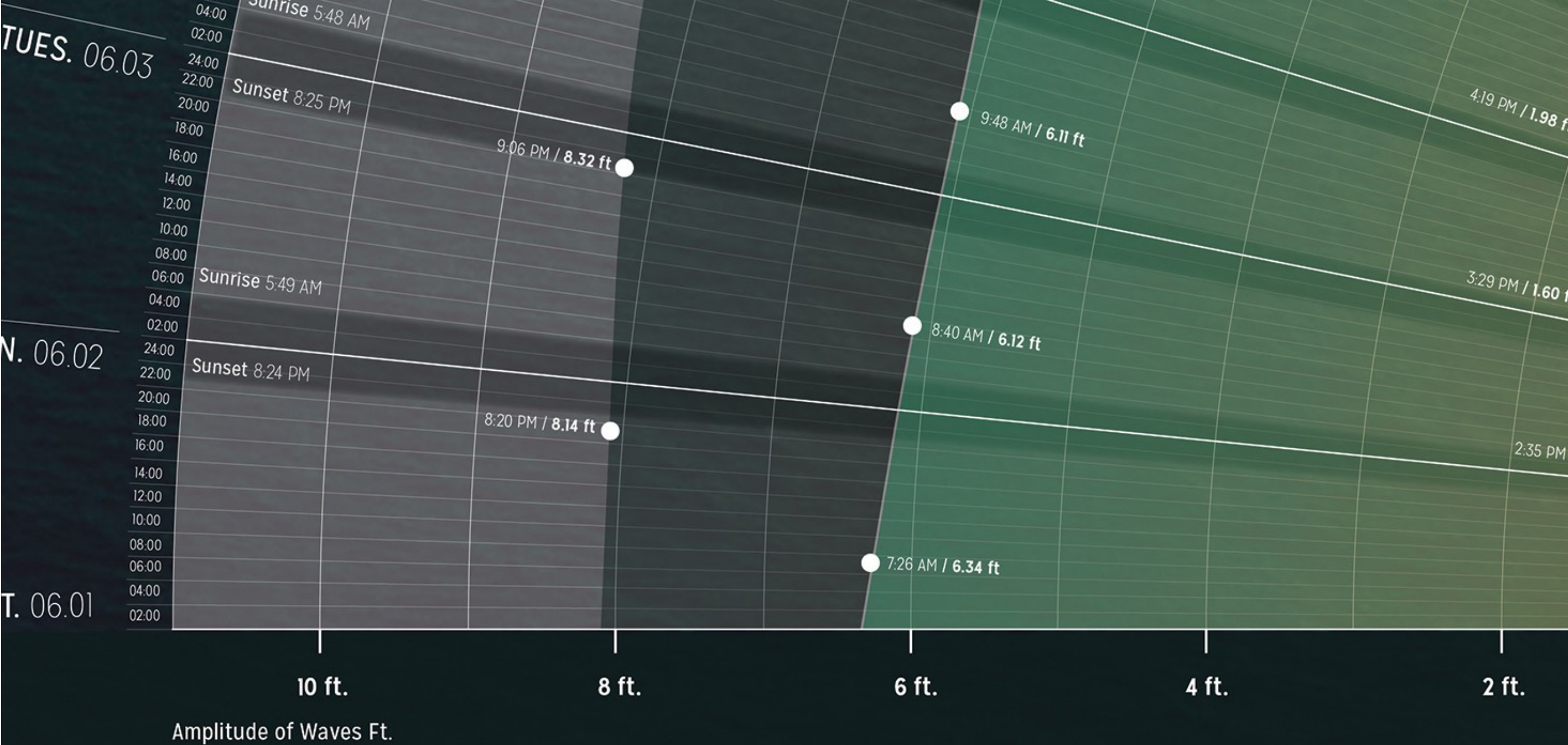
High Tide				
Low Tide				

Spring and Neap



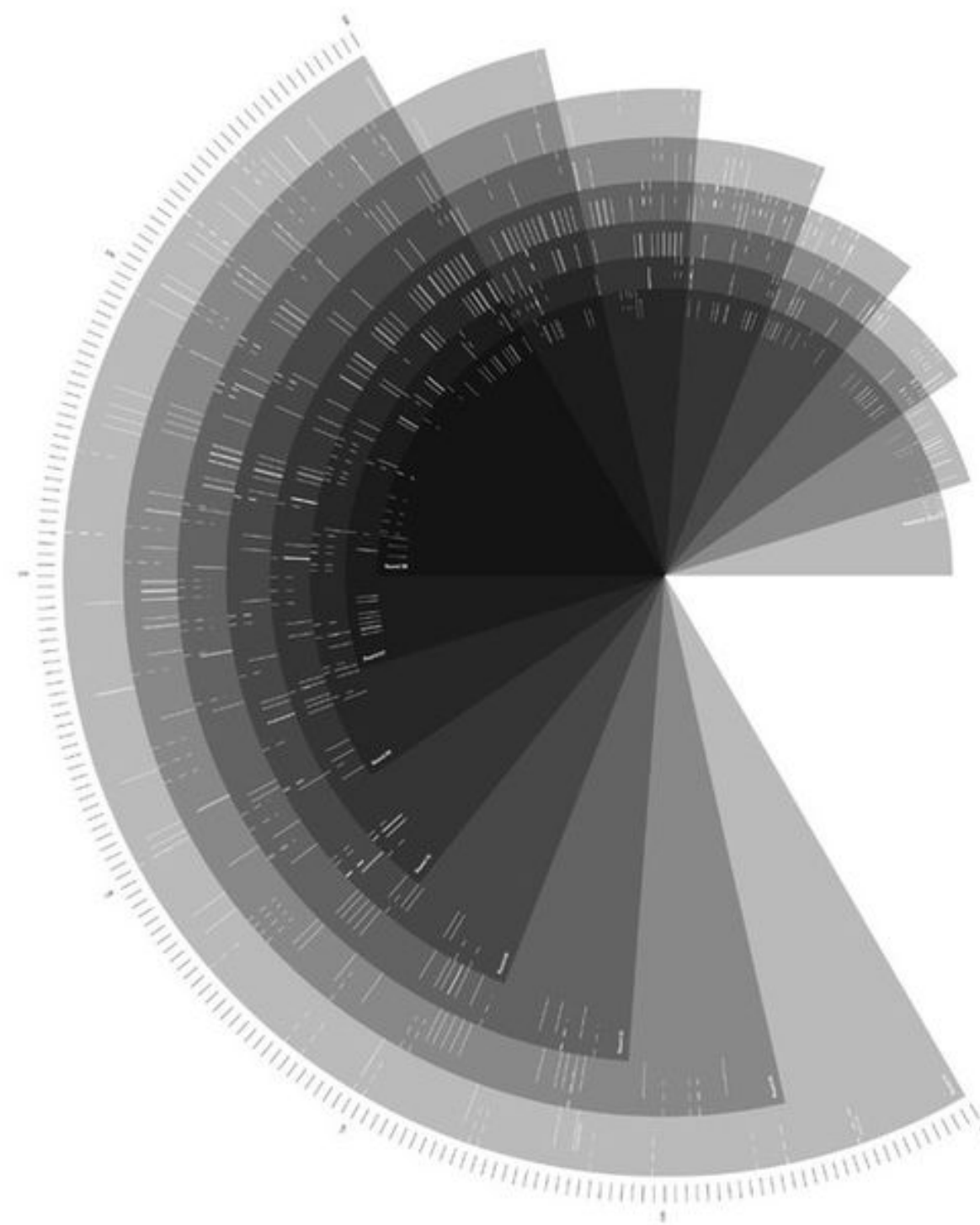
- High Tide
- Low Tide
- Mean High
- Mean Low
- Highest Tide
- Lowest Tide





TIDE CHART

Wharf 5 Redwood City



100

2.00

1.50

Round 06

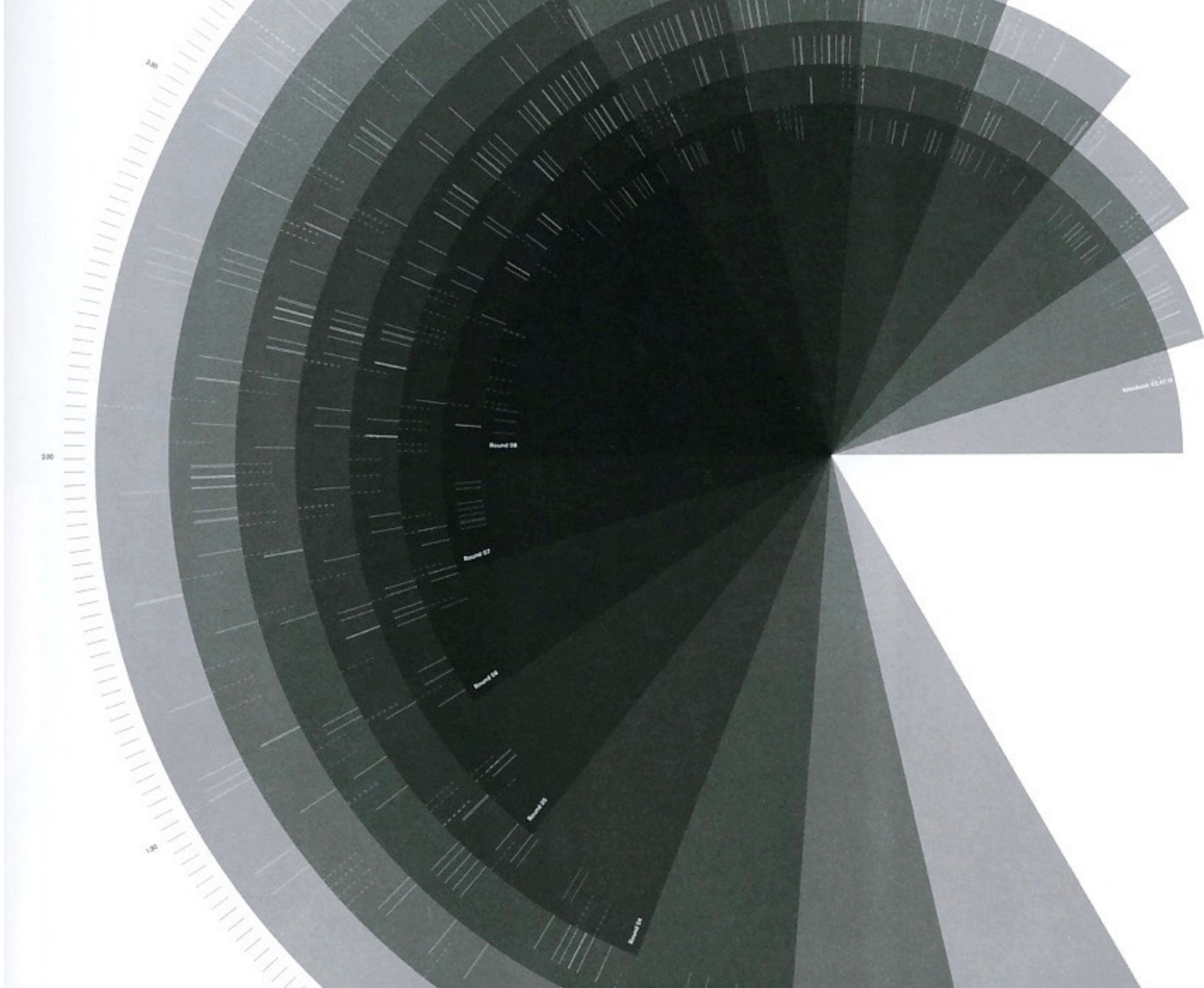
Round 07

Round 08

Round 09

Round 10

Standard 02.07.16

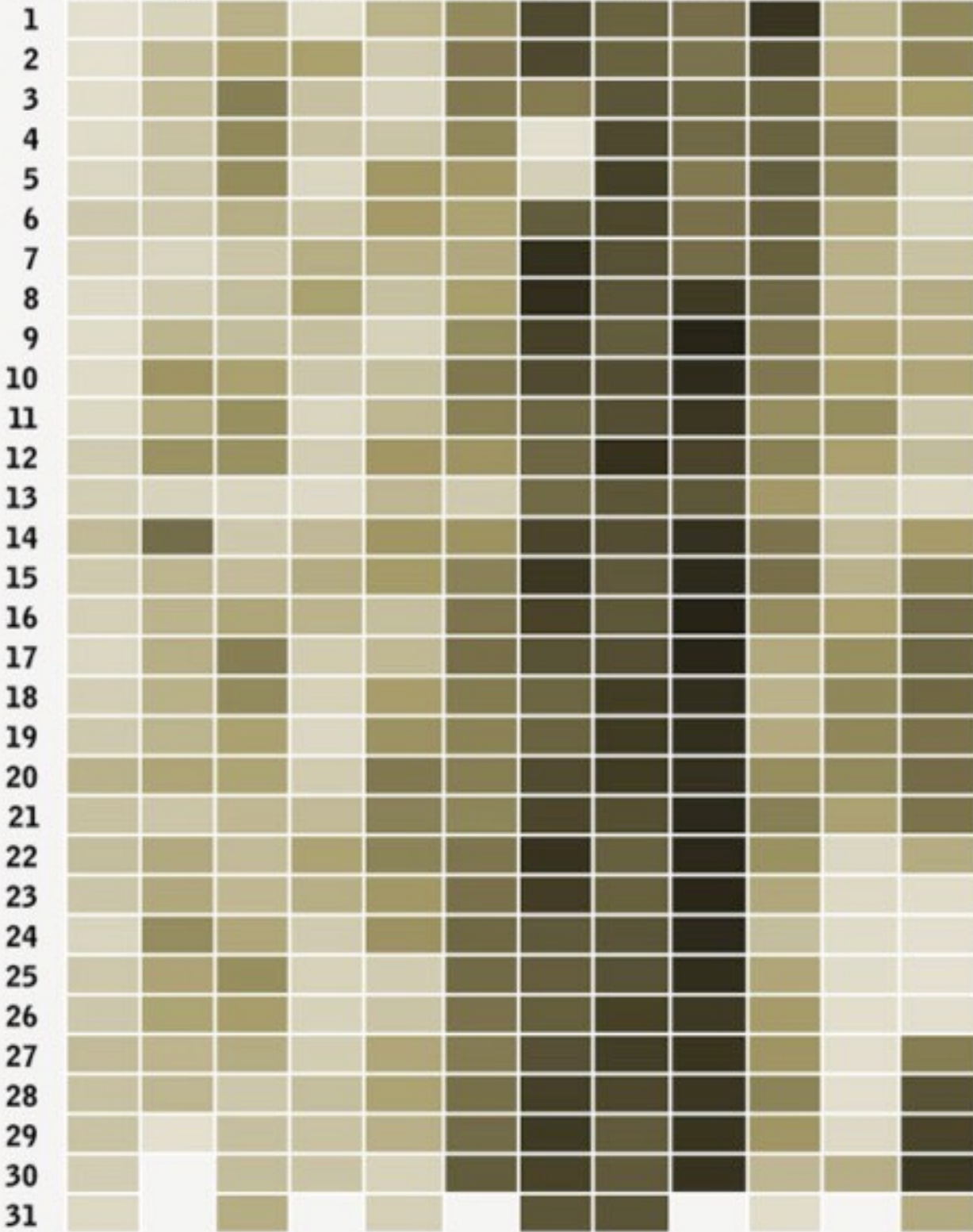


6 key factors which contributed to the current outburst of the discipline of data visualization:

- *computing storage**
- *open datasets (data.gov)**
- *online social network services**
- *democratization of visual tools (open source, flash, processing)**
- *mainstream media (NY times, bbc, cnn)**
- *hyper measurement**

Which Birth Dates Are Most Common?

DAY JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC



BIRTHDAY RANK

Less common



More common

America's Most Popular Birthdays

The days of the year, ranked by the number of babies born on each day in the USA

Matt Stiles, Data Journalist

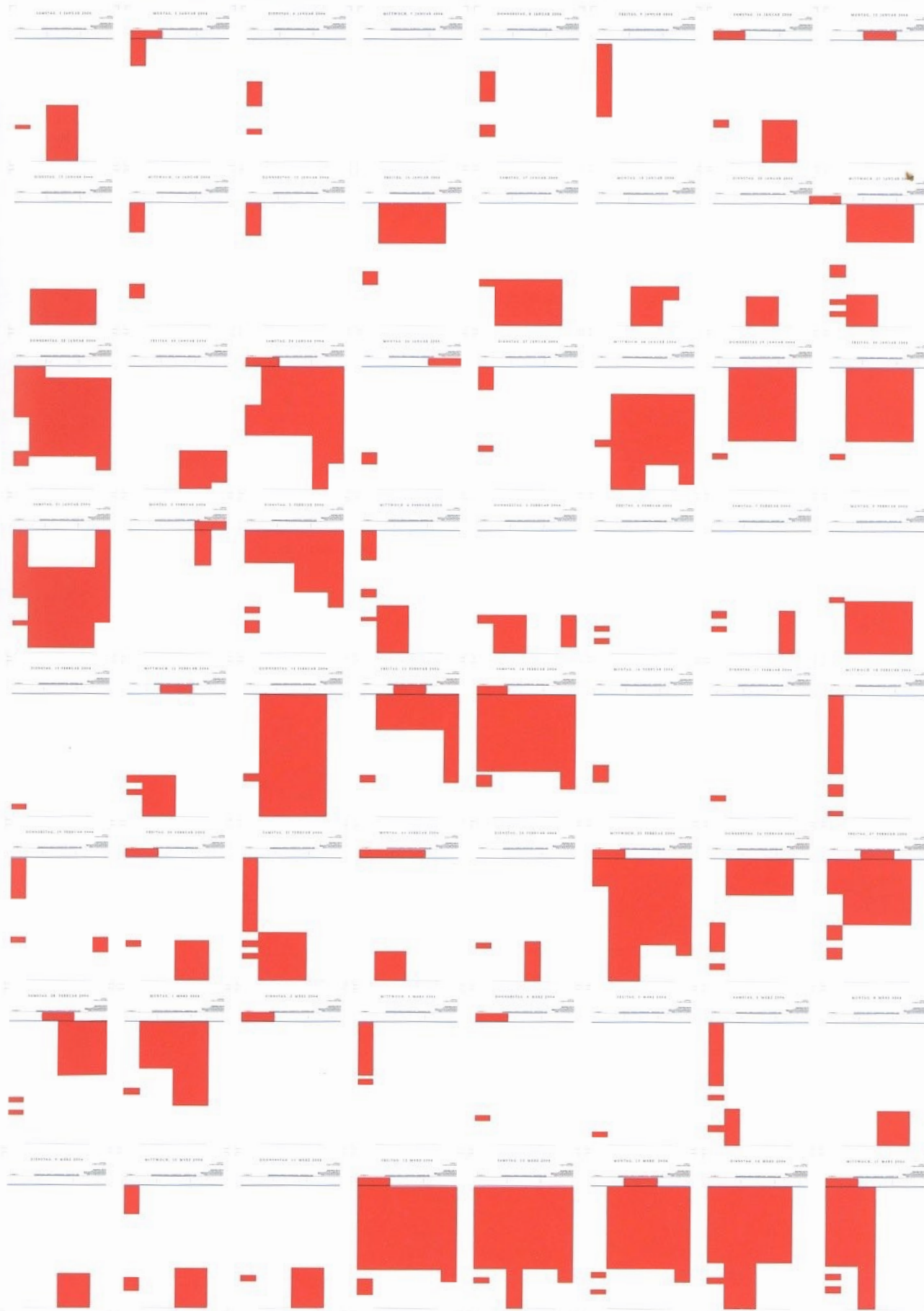
hidden patterns

δίνοντας σχήμα στα ακατέργαστα δεδομένα, μπορούμε να ανακαλύψουμε κρυμμένα μοτίβα, μοτίβα τα οποία μπορούν να αποκαλύψουν κάποιο μήνυμα στο κοινό. Η πληροφορία δεν έχει υπόσταση ή σχήμα, αλλά εναπόκειται στο σχεδιαστή, να δώσει σχήμα και νόημα στην πληροφορία.

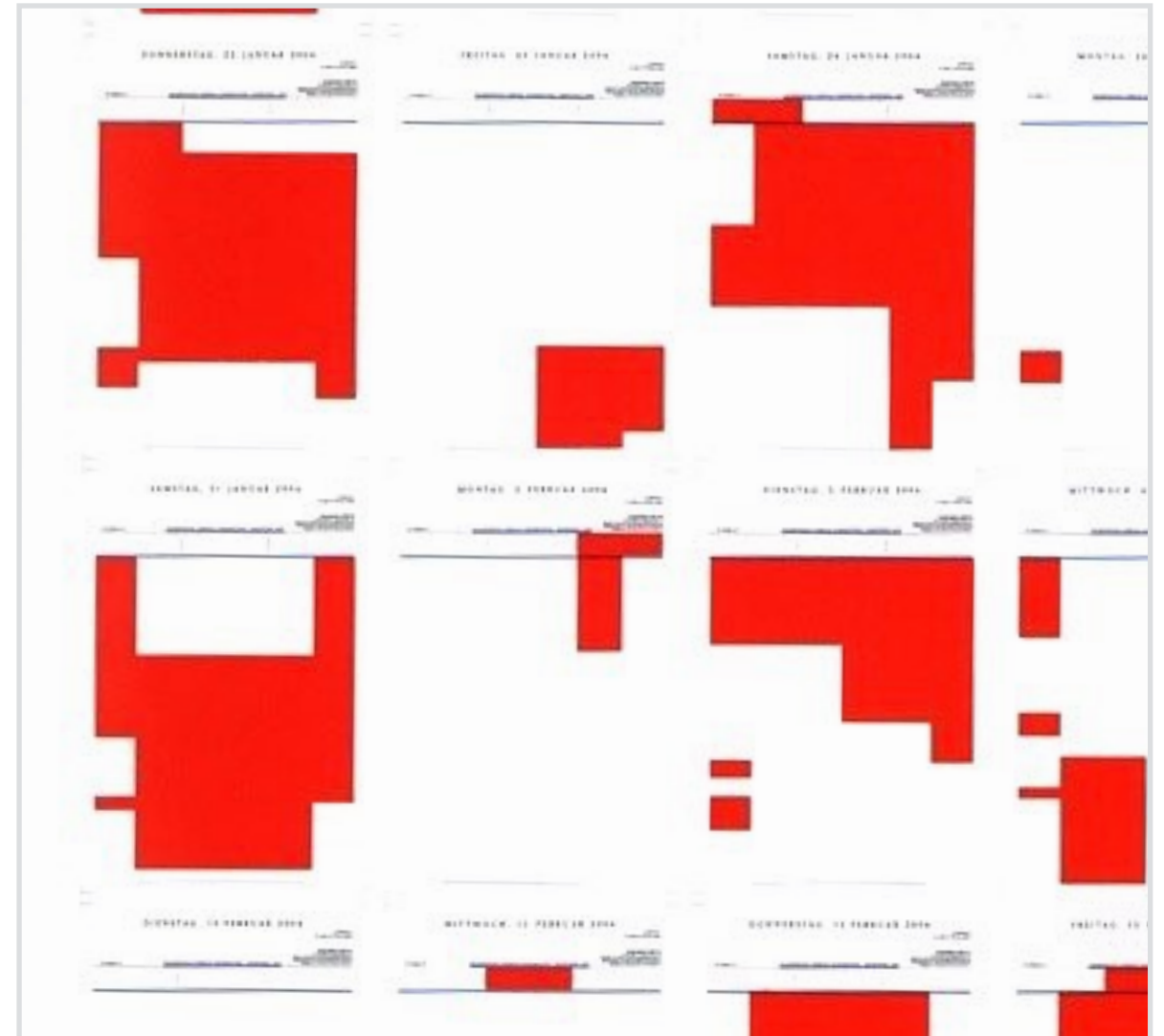
World of Violence

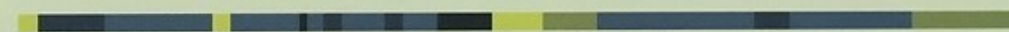
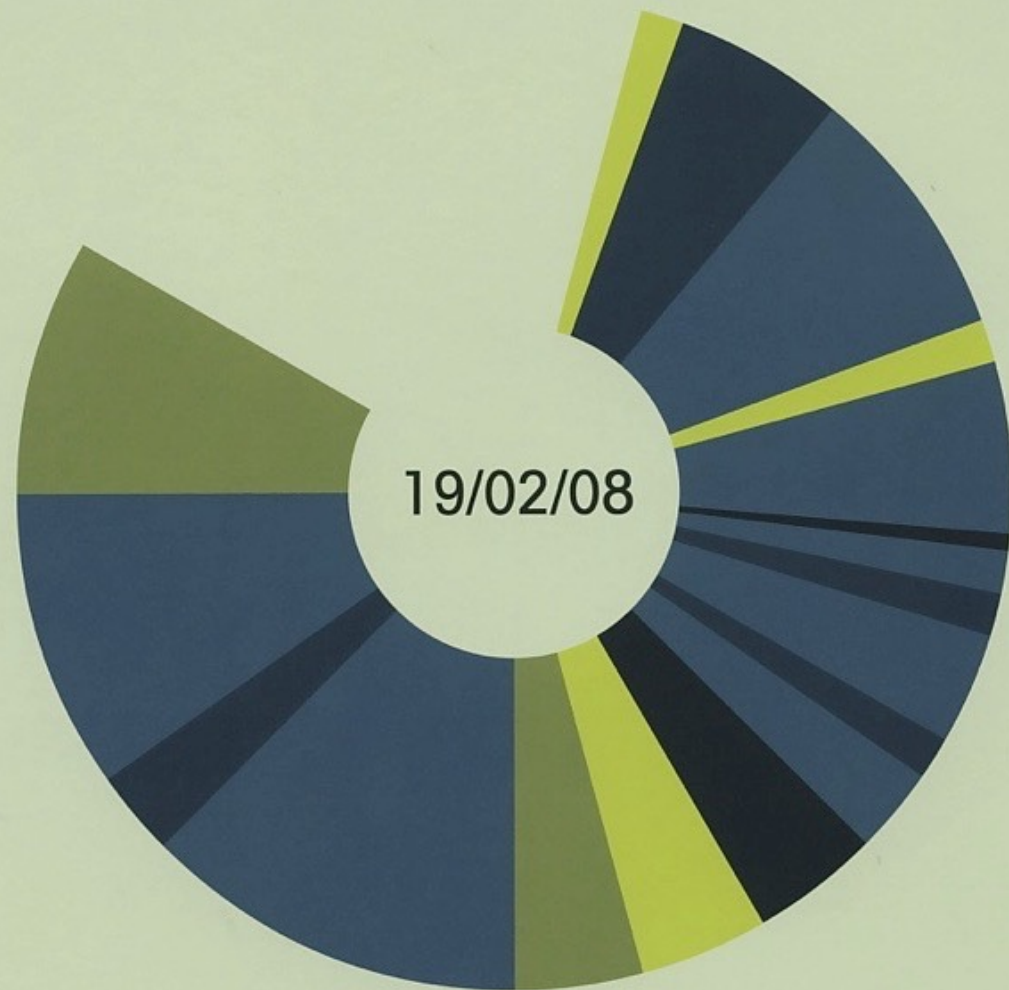
An analysis of the news, shows how blocks of space and shapes express opinion.

A barometer for mood and opinion
becomes an irregular UP & DOWN
of coloured segments



«The «Up & Down» of violence in our daily newspaper»





Food Online Work Misc Pool

19/02/08

design by SOCKET STUDIOS

46%

Thinks it is unethical if nurses and doctors go to work wearing an Islamic headscarf

42,5%

Thinks it is unethical if schoolteachers and educators go to work wearing an Islamic headscarf

66%

Thinks it is unethical if judges go to work wearing an Islamic headscarf

38%

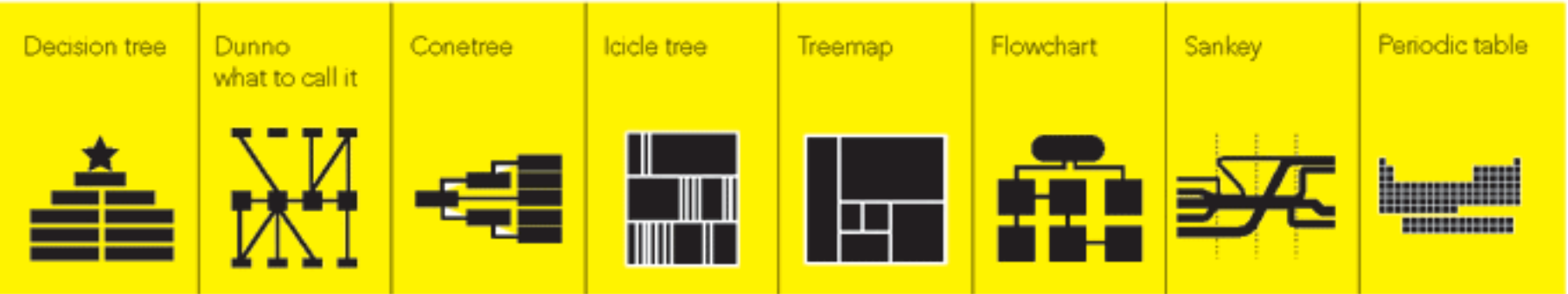
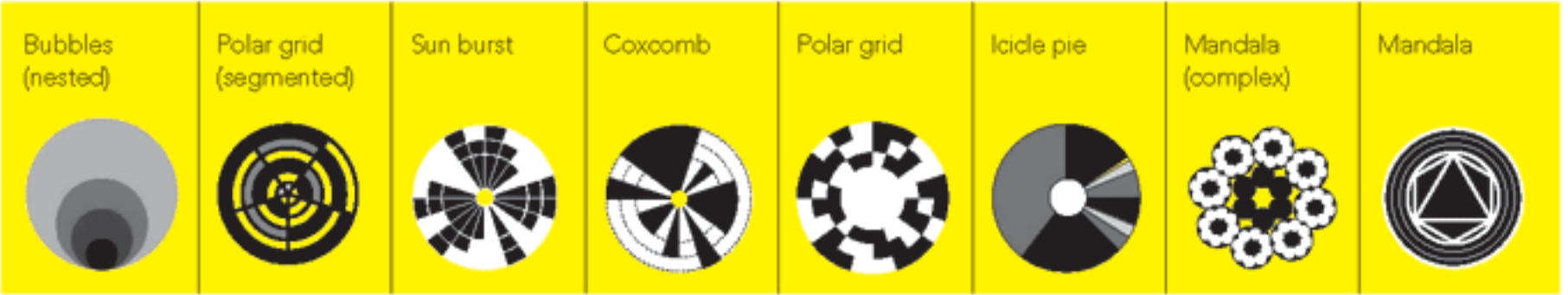
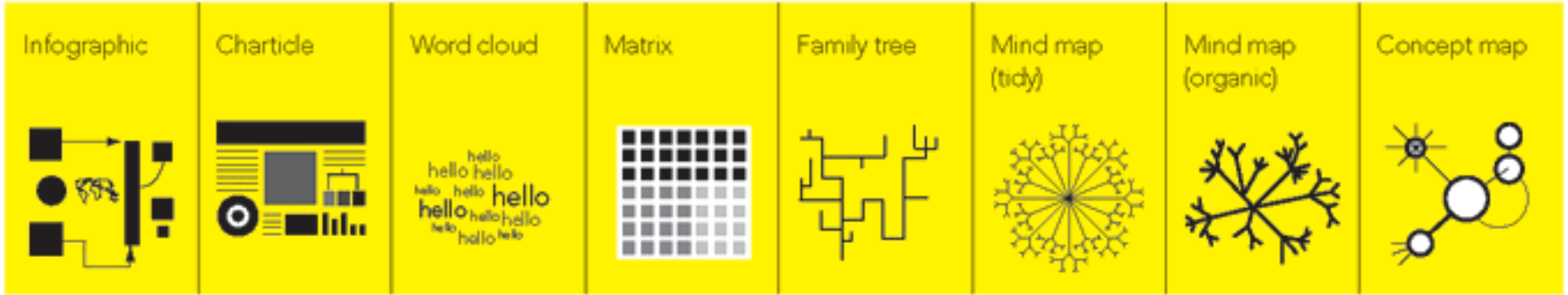
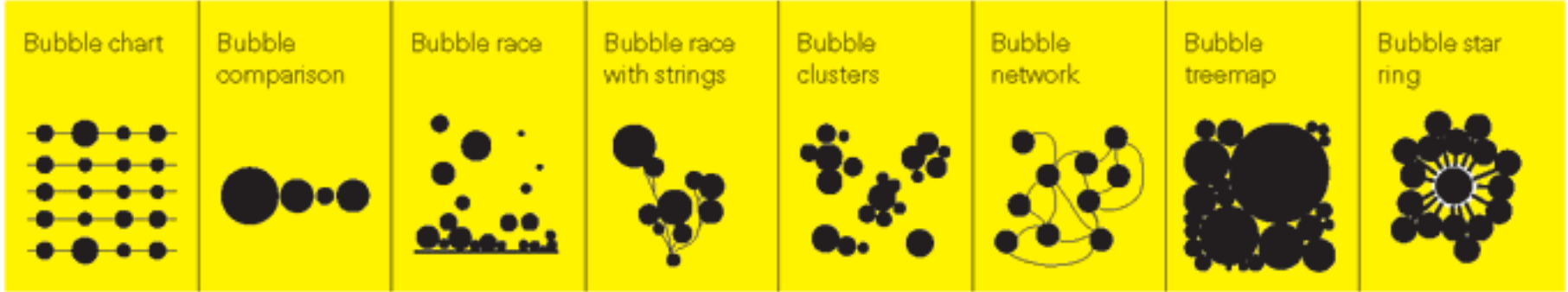
Thinks it is unethical if home carers go to work wearing an Islamic headscarf



**types of
data visualization**

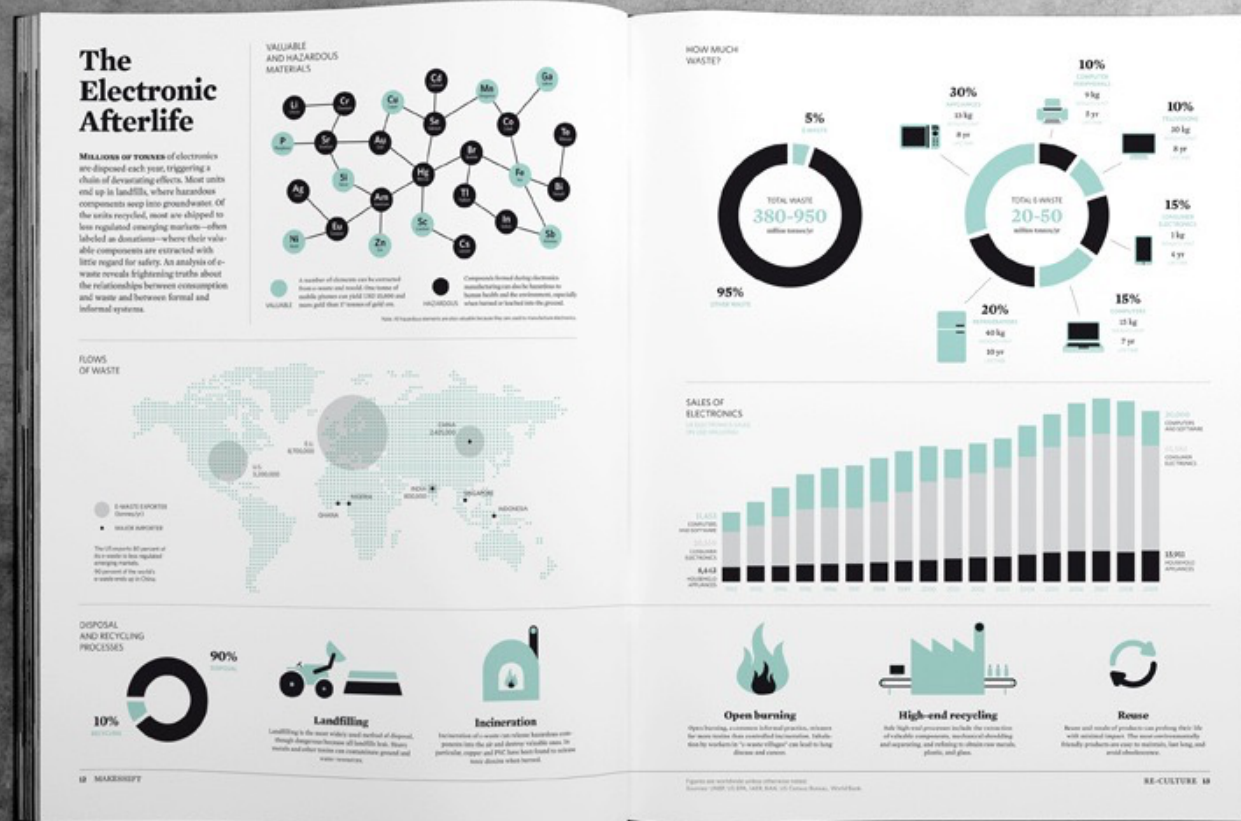
**temporal, tree, graphs, multi-
variable, territorial**

visual applications of data visualization



infographics

a blend of data-visualisation and graphic design



**what is
infographics?**

**η γραφιστική σύνθεση της
οπτικοποίησης δεδομένων, της
εικόνας, τυπογραφίας και άλλων
γραφικών στοιχείων.**

**telling a story through
information**

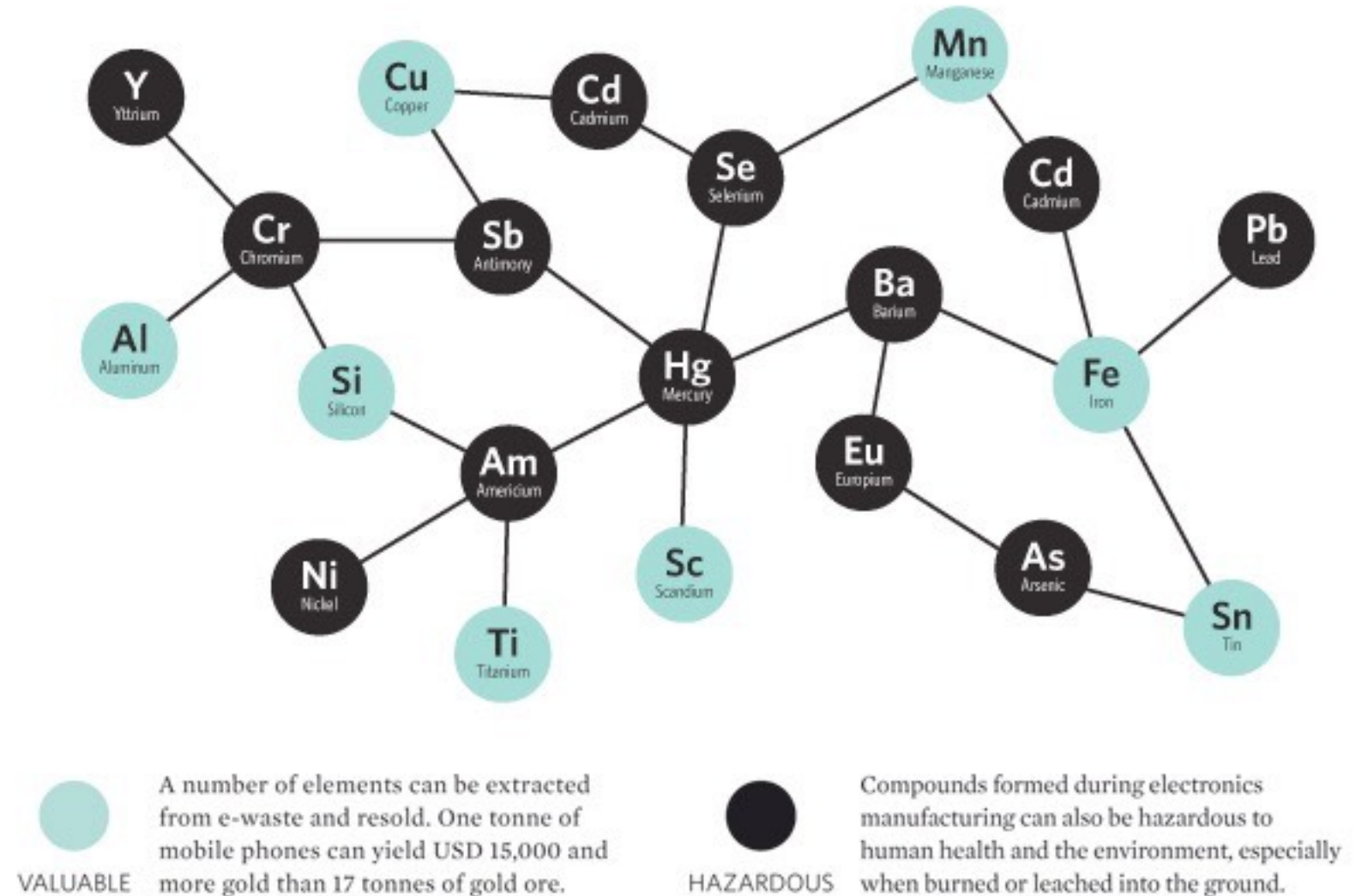
**Μια ανάλυση των ηλεκτρονικών
αποβλήτων, η οποία αποκαλύπτει
τις τρομακτικές αλήθειες για τη
σχέση μεταξύ της κατανάλωσης και
των αποβλήτων.**

RE-CULTURE 19

The Electronic Afterlife

MILLIONS OF TONNES of electronics are disposed each year, triggering a chain of devastating effects. Most units end up in landfills, where hazardous components seep into groundwater. Of the units recycled, most are shipped to less regulated emerging markets—often labeled as donations—where their valuable components are extracted with little regard for safety. An analysis of e-waste reveals frightening truths about the relationships between consumption and waste and between formal and informal systems.

VALUABLE AND HAZARDOUS MATERIALS



Note: All hazardous elements are also valuable because they are used to manufacture electronics.

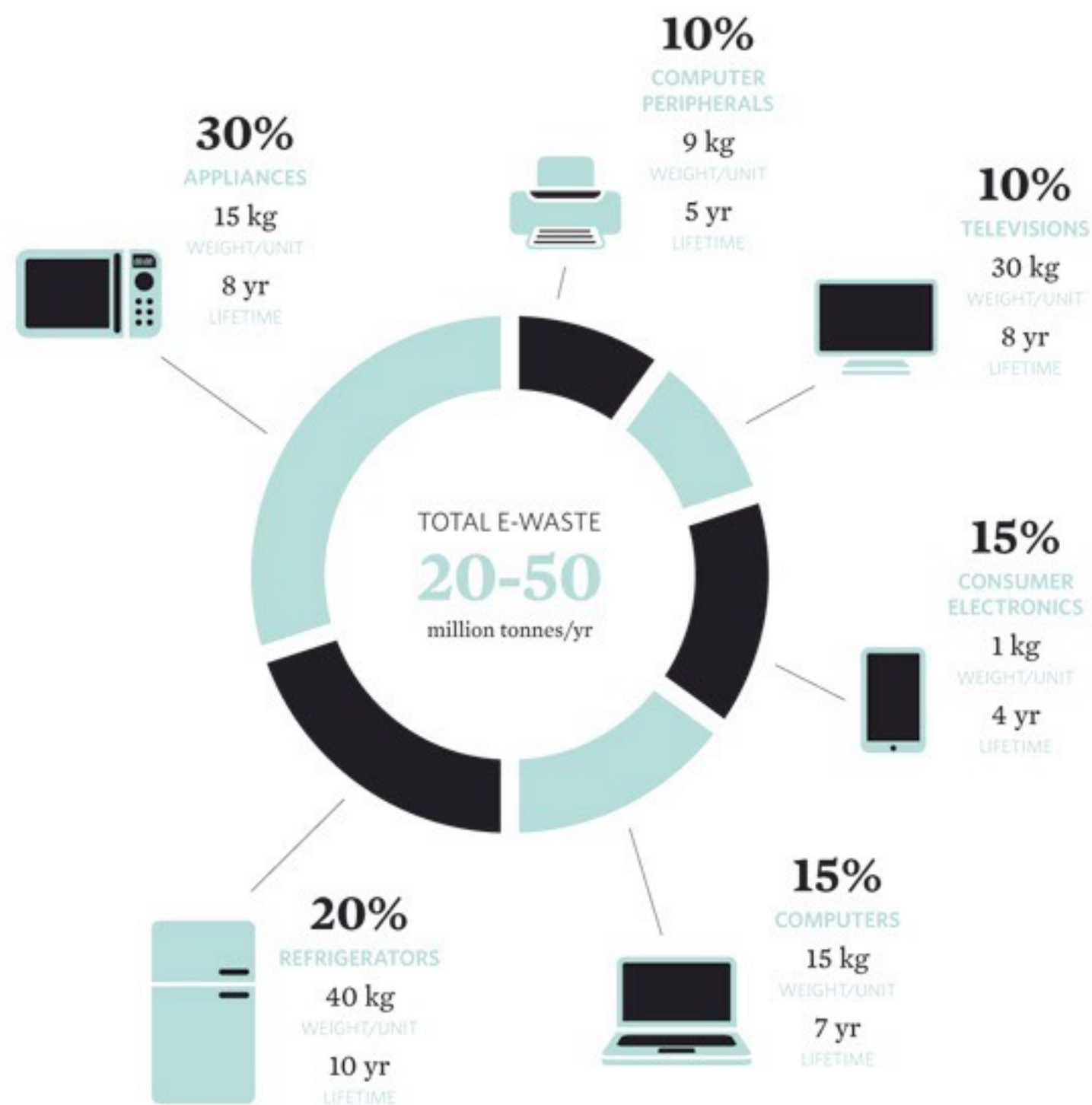
FLOWS OF WASTE



The electronic waste

Μια ανάλυση των ηλεκτρονικών αποβλήτων, η οποία αποκαλύπτει τις τρομακτικές αλήθειες για τη σχέση μεταξύ της κατανάλωσης και των αποβλήτων.

HOW MUCH WASTE?



FLOWS OF WASTE



DISPOSAL AND RECYCLING PROCESSES



Landfilling

Landfilling is the most widely used method of disposal, though dangerous because all landfills leak. Heavy metals and other toxins can contaminate ground and water resources.



Incineration

Incineration of e-waste can release hazardous components into the air and destroy valuable ones. In particular, copper and PVC have been found to release toxic dioxins when burned.

VIRTUAL WATER

inside products

THE VIRTUAL WATER CONCEPT
The virtual water concept is a way to measure the water footprint of a product. It is the sum of the water that is consumed in the production of a product, plus the water that is embodied in the product itself. This is a very important concept, as it allows us to see the true cost of a product in terms of water. It is a way to measure the water footprint of a product, and it is a way to see the true cost of a product in terms of water.

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When you eat corn, you are eating water. In fact, it takes 450 litres of water to grow one ear of corn. This is because corn is a very thirsty plant, and it needs a lot of water to grow. So, when you eat corn, you are also drinking water.



Wheat is a very thirsty plant, and it needs a lot of water to grow. In fact, it takes 500 litres of water to grow one pound of wheat. This is because wheat is a very thirsty plant, and it needs a lot of water to grow. So, when you eat wheat, you are also drinking water.



Rice is a very thirsty plant, and it needs a lot of water to grow. In fact, it takes 1700 litres of water to grow one package of rice. This is because rice is a very thirsty plant, and it needs a lot of water to grow. So, when you eat rice, you are also drinking water.



Apples are a very thirsty plant, and it takes 900 litres of water to grow one apple. This is because apples are a very thirsty plant, and it takes a lot of water to grow. So, when you eat an apple, you are also drinking water.



Oranges are a very thirsty plant, and it takes 50 litres of water to grow one orange. This is because oranges are a very thirsty plant, and it takes a lot of water to grow. So, when you eat an orange, you are also drinking water.



Coconuts are a very thirsty plant, and it takes 2500 litres of water to grow one coconut. This is because coconuts are a very thirsty plant, and it takes a lot of water to grow. So, when you eat a coconut, you are also drinking water.



Cheese is a very thirsty plant, and it takes 2500 litres of water to grow one big piece of cheese. This is because cheese is a very thirsty plant, and it takes a lot of water to grow. So, when you eat a piece of cheese, you are also drinking water.



Toast is a very thirsty plant, and it takes 650 litres of water to grow one package of toast. This is because toast is a very thirsty plant, and it takes a lot of water to grow. So, when you eat a piece of toast, you are also drinking water.



Tea is a very thirsty plant, and it takes 90 litres of water to grow one pot of tea. This is because tea is a very thirsty plant, and it takes a lot of water to grow. So, when you drink a pot of tea, you are also drinking water.



Wine is a very thirsty plant, and it takes 840 litres of water to grow one bottle of wine. This is because wine is a very thirsty plant, and it takes a lot of water to grow. So, when you drink a bottle of wine, you are also drinking water.



Beer is a very thirsty plant, and it takes 150 litres of water to grow one bottle of beer. This is because beer is a very thirsty plant, and it takes a lot of water to grow. So, when you drink a bottle of beer, you are also drinking water.



Potatocrisps are a very thirsty plant, and it takes 185 litres of water to grow one bag of potatocrisps. This is because potatocrisps are a very thirsty plant, and it takes a lot of water to grow. So, when you eat a bag of potatocrisps, you are also drinking water.



Milk is a very thirsty plant, and it takes 1000 litres of water to grow one litre of milk. This is because milk is a very thirsty plant, and it takes a lot of water to grow. So, when you drink a litre of milk, you are also drinking water.



Beef is a very thirsty plant, and it takes 4500 litres of water to grow one steak of beef. This is because beef is a very thirsty plant, and it takes a lot of water to grow. So, when you eat a steak of beef, you are also drinking water.



Goatmeat is a very thirsty plant, and it takes 1200 litres of water to grow one steak of goatmeat. This is because goatmeat is a very thirsty plant, and it takes a lot of water to grow. So, when you eat a steak of goatmeat, you are also drinking water.



Sheepmeat is a very thirsty plant, and it takes 1440 litres of water to grow one steak of sheepmeat. This is because sheepmeat is a very thirsty plant, and it takes a lot of water to grow. So, when you eat a steak of sheepmeat, you are also drinking water.



Chicken is a very thirsty plant, and it takes 1170 litres of water to grow one breast of chicken. This is because chicken is a very thirsty plant, and it takes a lot of water to grow. So, when you eat a breast of chicken, you are also drinking water.



Eggs are a very thirsty plant, and it takes 200 litres of water to grow one single egg. This is because eggs are a very thirsty plant, and it takes a lot of water to grow. So, when you eat a single egg, you are also drinking water.

German designer
Timm Kekeritz,
The water footprint



2500



litres of water for
one big piece (500 g) of
Cheese

To produce one kilogram of cheese we need 10 litres of milk.
The volume of water required to produce this milk is 1000 litres.
Producing 10 litres of milk also produces 2.5 litres of whey, which generates more or less the same market value as the cheese. Hence, the volume of water to produce 10 litres of milk gets divided into cheese and whey more or less equally.

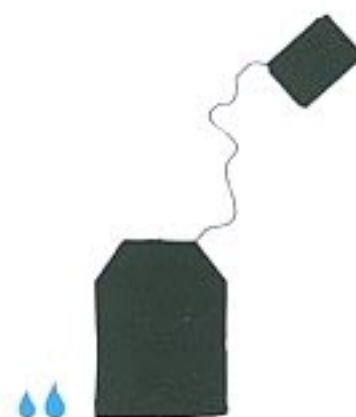


650



litres of water for
one package (500 g) of
Toast

Producing wheat requires 1500 litres of water per kilogram (global average).
One slice of bread has a weight of about 30 g, which implies a water footprint of 40 litres.
If the bread is consumed together with a slice of cheese (50 g), then it all together requires 90 litres of water.



90



litres of water for
one pot (750 ml) of
Tea

To produce one kilogram of fresh tea leaves, we require 2400 litres of water. One kilogram of fresh tea leaves gives 0.25 kg of made tea, so that one kilogram of made tea (black tea as we buy it in the shop) requires 9600 litres of water. For a standard cup of tea we require three gram of black tea, so that a cup of tea requires 90 litres of water. The water needs for post harvest processing can be neglected if compared to the water needs for growing the tea plant. The water footprint of tea thus mainly refers to rainwater use.



8400



1000



litres of water for
one litre of
Milk

Producing a glass of milk (200 ml) requires 200 litres of water.
Drinking the same volume of orange juice or apple juice would require 120 and 150 litres of water respectively.
Drinking a glass of water requires only little more than the water itself.



4500



litres of water for
one steak (300 g) of
Beef

In an industrial beef production system, it takes on average three years before the animal is slaughtered to produce about 300 kg of boneless beef. The animal consumes nearly 1500 kg of grain, 1000 kg of roughages, 24 m³ of water for drinking and 1 cubic meter of water for servicing. This means that to produce one kilogram of boneless beef, we use about 5 kg of grain, 30 kg of roughages and 175 litres of water (only for drinking and servicing). Producing the volume of feed requires about 15300 litres of water in average.



1200



litres of water for
one steak (300 g) of
Goatmeat

In an industrial farming system, it takes 2 years on average before the goat is slaughtered. It will produce 30 kg of fresh goat meat.
During its lifetime the goat consumes about 55 kg of grain, 165 kg of roughages and 15 m³ of water for drinking and servicing the farmhouse. This means that to produce one kilogram of goat meat, we use about 235 kg of grain and 175 litres of drinking and servicing water. Producing 25 kg of feed of this composition takes about 4 m³ of water in average.

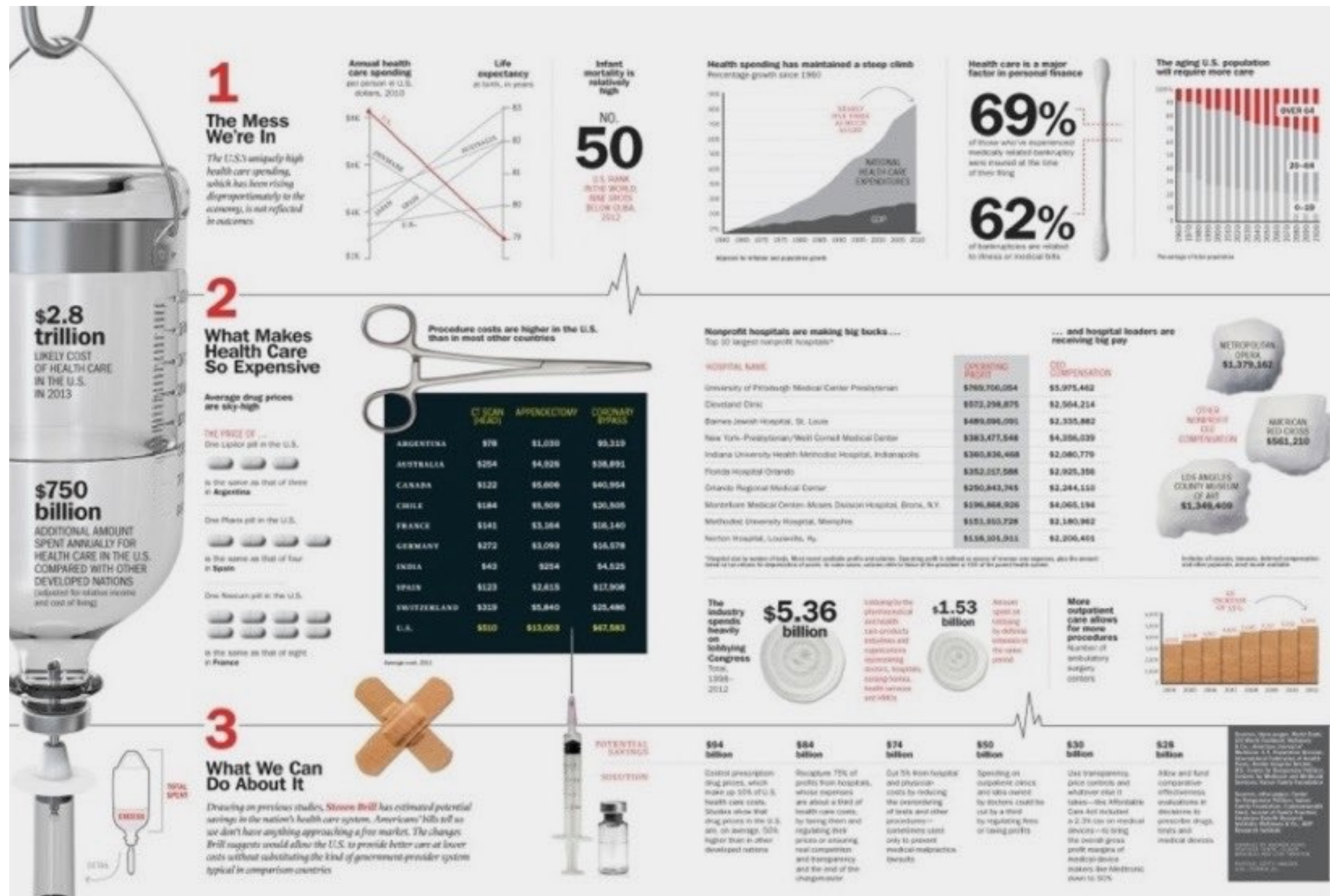


1440

Heather Jones

Why health care is so expensive?

The huge mess of the U.S regarding health care, hospitalization, drug costs etc.



Digital data visualisation (realtime/network/interactive)

- προγραμματισμός
- αυτόματος σχεδιασμός σε πραγματικό χρόνο
- τυχαίες μορφές
- ψηφιακές διαδραστικές εφαρμογές
- ψηφιακή σηματοδότηση και ψηφιακά διαγράμματα
- εφαρμογές σε smartphones
- εφαρμογές σε πραγματικό χώρο

CNN ecosphere project [+]

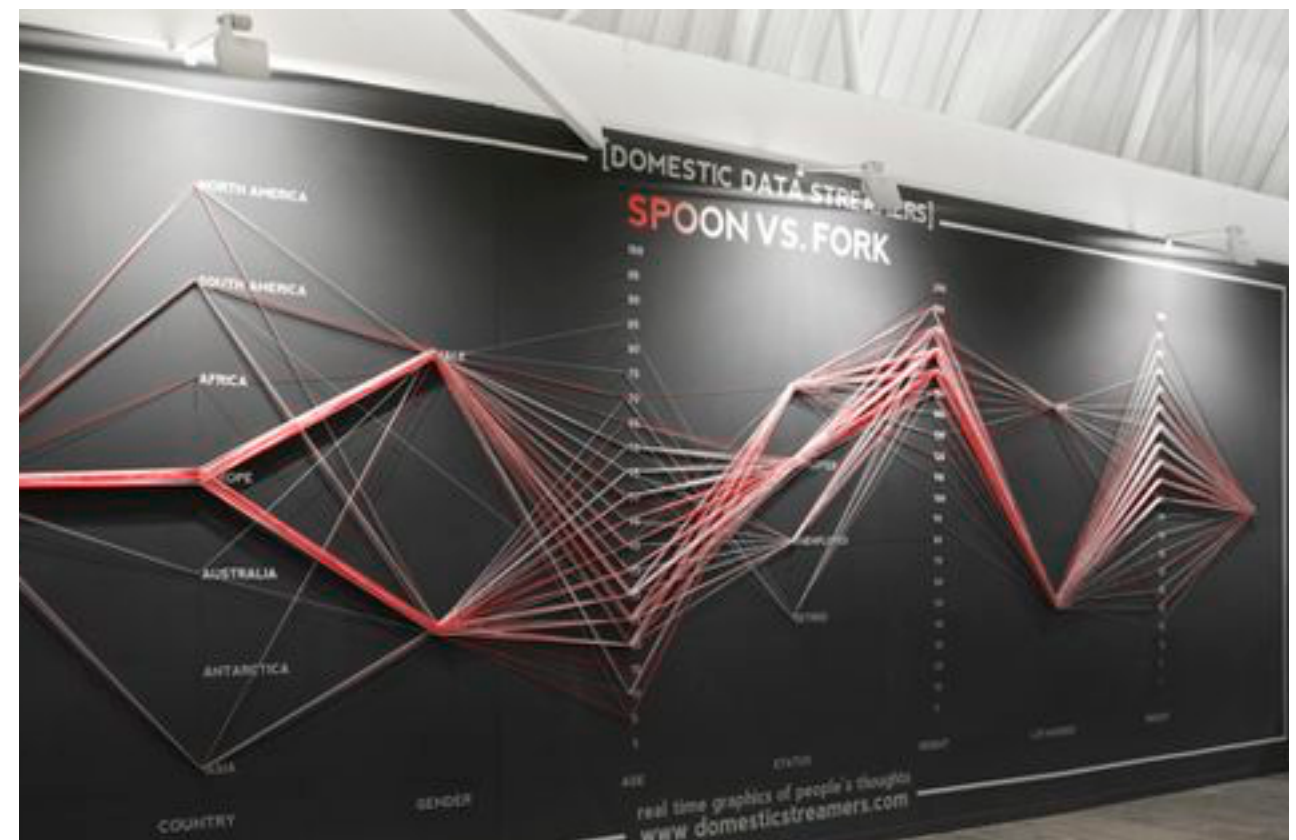
motion infographics

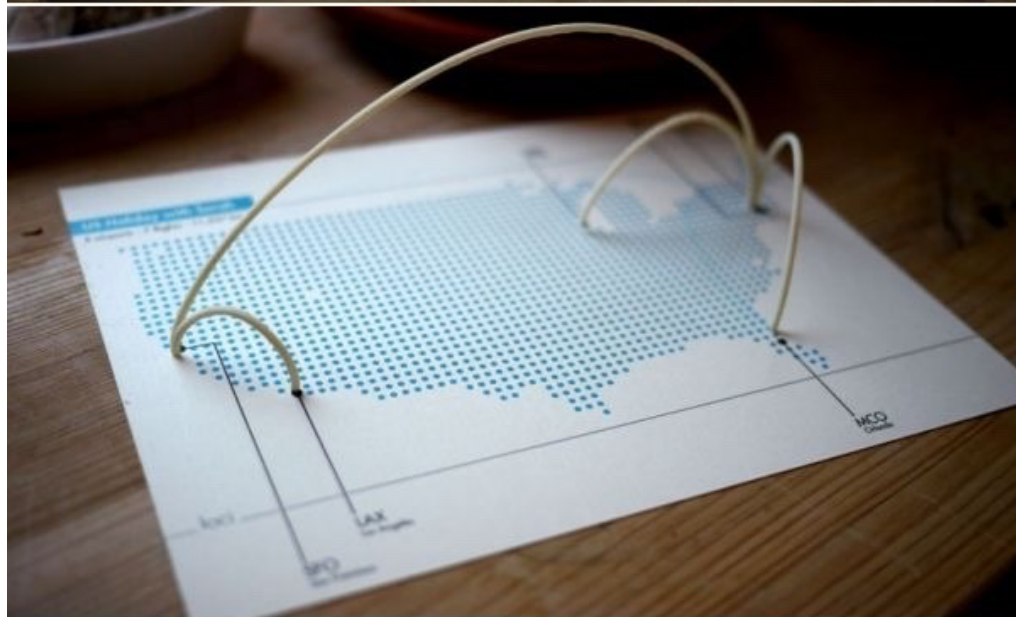
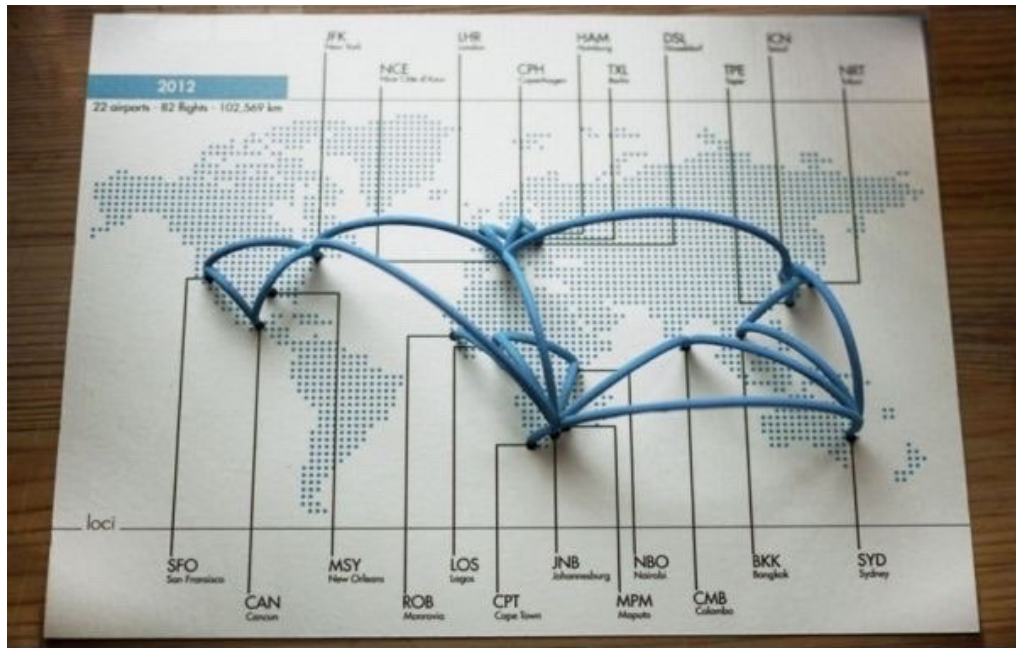
ex.

The Solar System [+]

more experimentation

**three dimensional
infovisualisation in real
physical space**





categories of info design

- *data visualisation > static, realtime, interactive**
- *mapping > topography, cartography, cartography of networks**
- *infographics > static, realtime, interactive**
- *signage + wayfinding**
- *iconography**
- *motion infographics**

so...what is information design?

**it is a visual explanation that helps
you more easily to understand, find
or do something.**

it is universally understandable

**it stands alone and is completely
self-explanatory**

**it reveals information that was
formerly hidden or submerged**

**it's visual, and when necessary,
integrates words and pictures in a
fluid, dynamic way.**

είναι μια οπτική επεξήγηση που
μας βοηθά πιο εύκολα να
κατανοήσουμε, να εντοπίσουμε ή
απλά να κάνουμε κάτι.

είναι κατανοητό για όλους

είναι αυτόνομο και εντελώς
αυτονόητο

αποκαλύπτει πληροφορίες που
προηγουμένως ήταν κρυμμένες ή
δεν ήταν "ορατές"

είναι μια οπτική γλώσσα, και όταν
είναι απαραίτητο, ενσωματώνει
λέξεις και εικόνες με ένα ρευστό,
δυναμικό τρόπο.

