

THE INTERFACE
DECONSTRUCTED



“Power in the digital age is about making things easy”

[Bill Gates]

COGNITIVE CAPITALISM

Wealth is no longer produced exclusively by material goods but through intangible actions such as **human communication**, **experience** and **cognition**. Thus, most of our life transactions are being **quantified** and **commodified**.

SOCIAL ENGINEERING

“The efforts undertaken by governments, media or other private groups to influence popular opinion and attitudes. What this means is that social engineering is a powerful apparatus for **enforcing ideology**, guaranteeing the elite’s dominance over the functioning of the whole economical system. Simply put, social engineering is an instrument at the service of economical reproduction.”



“If we understand the mechanisms and motive of the group mind, it is now possible to control and regiment the masses according to our will without them knowing it.”

[Edward Bernays]

BELIEVE IN YOURSELF!



Don't test one brand alone ... compare them all!

TRY THIS TEST!
Take a PHILIP MORRIS and any other cigarette. Then, here's all you do:

1. Light up either cigarette. Take a pull—don't inhale—just let the smoke come through your nose.
2. Now do exactly the same thing with the other cigarette.

NOTICE THAT PHILIP MORRIS IS DEFINITELY LESS IRRITATING. DEFINITELY MILDER!



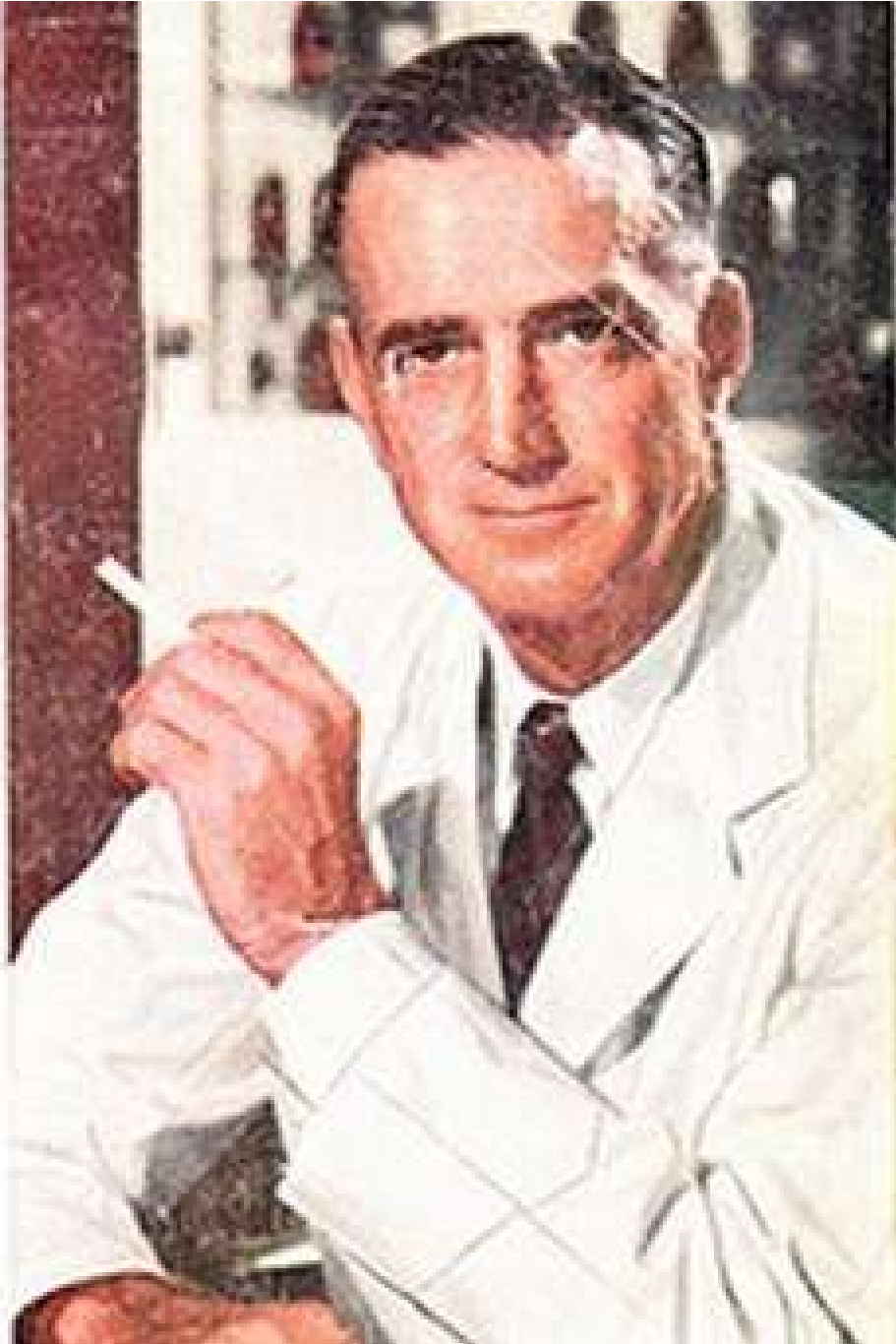
Unlike others, we never ask you to test our brand alone. We say ... **compare PHILIP MORRIS ... match PHILIP MORRIS ... judge PHILIP MORRIS** against any other cigarette! Then make your own choice! Remember

NO CIGARETTE HANGOVER
means MORE SMOKING PLEASURE!

CALL FOR **PHILIP MORRIS**

According to repeated nationwide surveys,

More Doctors
Smoke CAMELS
than any other
cigarette!



PSYOPS

A strategy used in military and government intelligence networks aimed at influencing the emotions, motives, objective reasoning, and ultimately the behavior of governments, organizations, groups, and individuals.

level. Integrating combat cameramen into their operations, they demonstrate experienced use of cameras and listening devices. While a more experienced military observer would notice crude tactics and skill demonstrated (firing wildly, poor weapons maintenance, and small unit tactics) on the part of the armed insurgents, these are not readily apparent to the target market, which has been termed the 'Jihad Market.' Money and recruits from within Iraq and abroad follow performance and success, and here it is apparent that success in the information campaign is much more important than real tactical combat success."²²

Since the beginning of the occupation in Iraq, the United States has attempted to run its own IO campaign using traditional media (flyers and U.S.-funded television and radio networks). Unfortunately, the NPR report also illustrated the breadth of mistrust Iraqis have for traditional media outlets: "Because the truth has been denied to Iraqis for so long, they are now searching the internet for truth. A taxi driver stated that he stays away from ["news"] websites that are sponsored by foreign governments, the news media, or insurgent groups. He states that it is simply 'hard to find [a] reliable

source of news.'"²³

With such skepticism running rampant in the Middle East, a large window of opportunity is open for a powerful marketing campaign using alternative media. It could have a tremendous effect.

Understanding marketing is critical to understanding the strengths and limitations of U.S. Army information operations. More important, the art and success of IO as a marketing application comes from skilled, impassioned practitioners. The Army should acquire skilled marketing professionals by contracting with U.S. companies, by co-opting the best local national counterparts, or by providing marketing training for military IO practitioners.

While information operations have parallels to the business-world practices of marketing, promotion, and sales, the military has much more at stake than quarterly earnings. The IO mission is so crucial and complex it deserves the most skilled marketers the United States has to offer. Selling the United States in current and future deployments is of paramount importance. Without proper planning and resourcing of the IO mission, much effort, and many lives, will be wasted on diminished successes, or even failures. **MR**

NOTES

1. FM 3-0, *Operations* (Washington, DC: U.S. Government Printing Office [GPO], 14 June 2001), chap. 11, sec. 1.

2. *Ibid.*, chap. 11, sec. 49.

3. A recent work on PSYOP in the Pacific Theater is Alison Gilmore's *You Can't Fight Tanks With Bayonets: Psychological Warfare Against the Japanese Army in the Southwest Pacific* (Lincoln: University of Nebraska Press, 1998); Allan M. Winkler discusses American use of propaganda at the strategic level in *The Politics of Propaganda: The Office of War Information, 1942-1945* (New Haven: Yale University Press, 1978).

McGraw-Hill Irwin, 2004), 7.

11. Norman Emery, "Information Operations in Iraq," *Military Review* (September-October 2004), 11-14. Emery refers to an "Insurgent Payoff Function" that provides a simplified relationship between the cost and value of supporting a particular course of action. While oversimplifying the nonlinear interactions of the two, it does attempt to illustrate the need to evaluate, and thus communicate, the utility of supporting U.S. operations among the population.

12. Terry Paul, *Promotional Strategy*, class and lecture notes, The Ohio State University, Summer 2004.

“PsyOp use the principles of marketing. The concepts for building PsyOp themes are the same as commercial advertising. PsyOp personnel use themes the same way marketers use advertising.”

	Corporate	PSYOP
Stakeholders	Investors, Management, Customers	NCA, Combat Commander, DOS, OGA
Objective Strategy	Market Share, Profit, Corporate Growth/Survival	National Strategy, Military Strategy, Information Strategy
Marketing Strategy	Consumer-based, Competitor-Based, Product Based	Target Audience-based, Enemy-based, Military-based
Product	Consumer, Industrial, Business, Services	Security, Democracy, National Objectives
Price	Cost-based, Demand-based, Competition-based	Freedom-based, Security-based, Cultural-based
Promotion	Advertising, Public Relations, Personal Selling	Info Campaign, Public Affairs, Military Interaction
Distribution	Push, Pull	Military Info Channels, Indigenous, Third Party

<http://www.newworldwar.org/psyop.htm>

<https://publicintelligence.net/restricted-u-s-army-psyops-manual/>

<https://www.goarmy.com/careers-and-jobs/browse-career-and-job-categories/intelligence-and-combat-support/psychological-operations-specialist.html/>









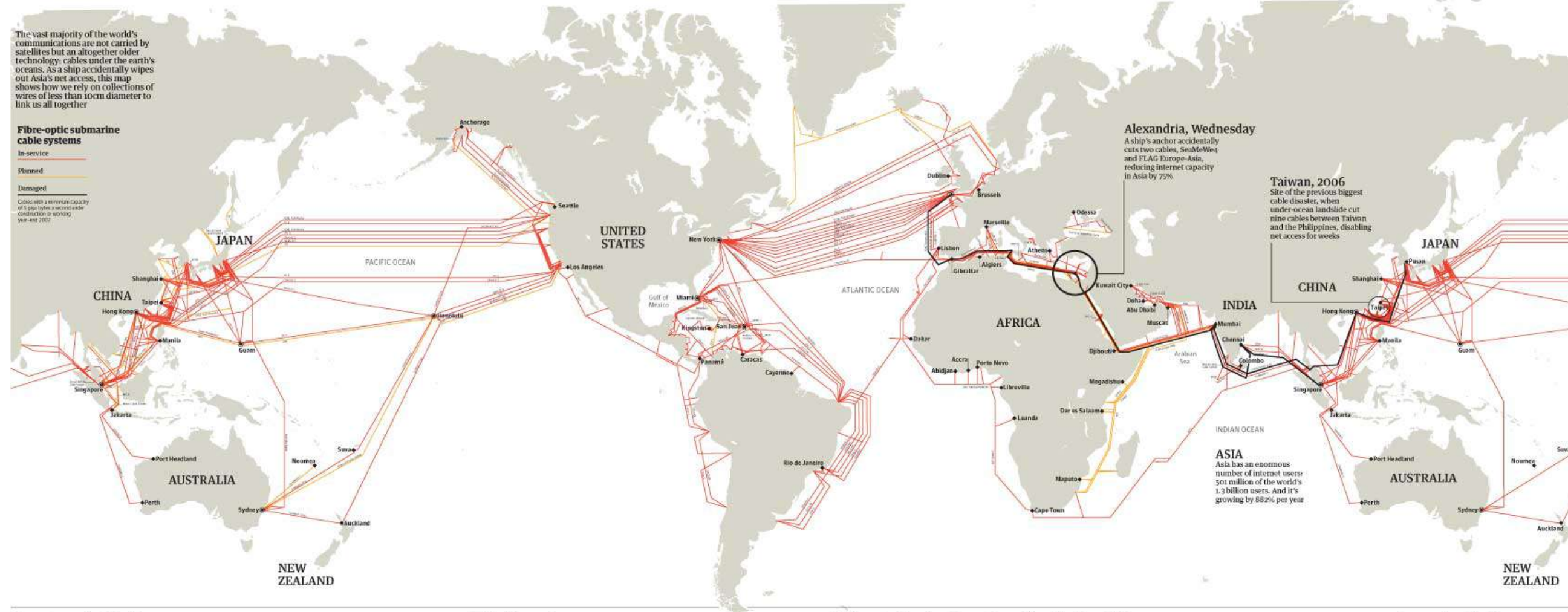
The ARPANET in December 1969

The internet's undersea world

The vast majority of the world's communications are not carried by satellites but an altogether older technology: cables under the earth's oceans. As a ship accidentally wipes out Asia's net access, this map shows how we rely on collections of wires of less than 10cm diameter to link us all together

Fibre-optic submarine cable systems
 In-service
 Planned
 Damaged

Cables with a minimum capacity of 100 Gbps have received either construction or working approval since 2007

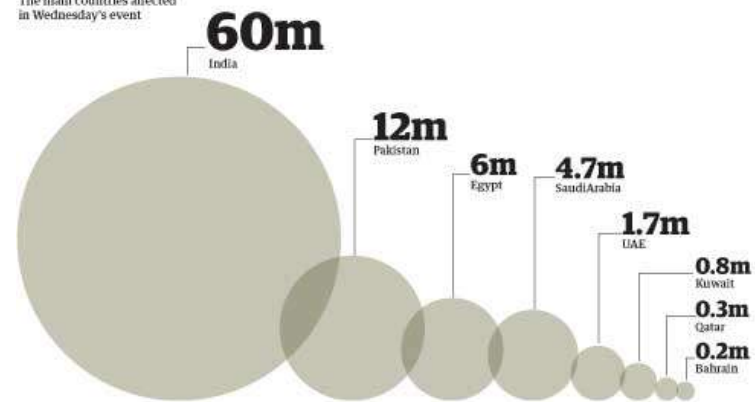


Alexandria, Wednesday
 A ship's anchor accidentally cuts two cables, SeaMeWe4 and FLAG Europe-Asia, reducing internet capacity in Asia by 75%

Taiwan, 2006
 Site of the previous biggest cable disaster, when under-ocean landslide cut nine cables between Taiwan and the Philippines, disabling net access for weeks

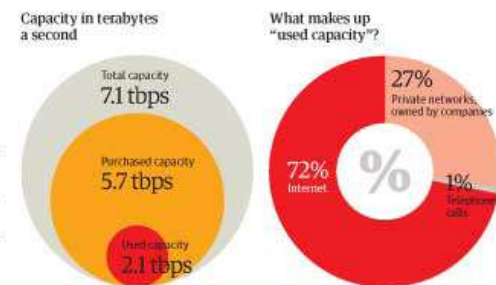
ASIA
 Asia has an enormous number of internet users: 500 million of the world's 1.3 billion users. And it's growing by 88% per year

Internet users affected by the Alexandria accident
 The main countries affected in Wednesday's event



World cable capacity

Submarine cable operators light (turn on) capacity on their systems to sell bandwidth to other carriers. Carriers buy extra capacity, mainly to hold in reserve. On the trans-Atlantic route 80% of the bandwidth is purchased, but only 29% is used



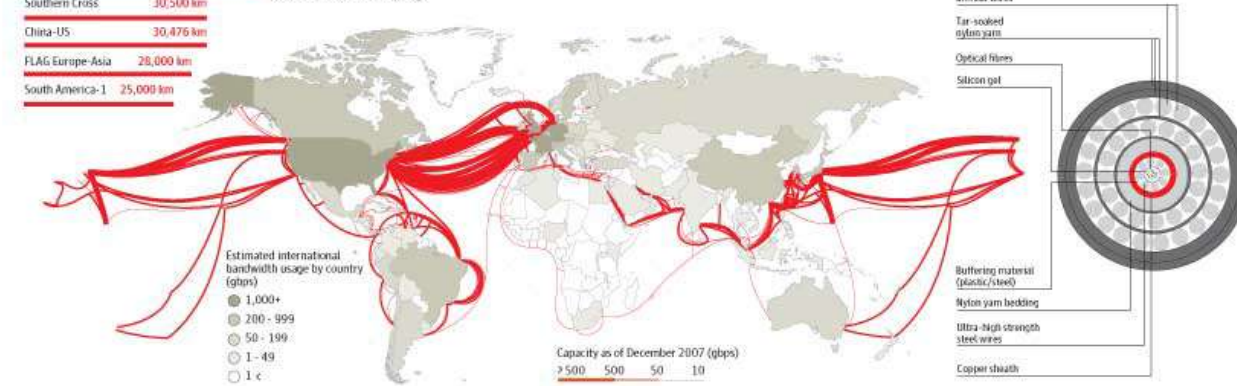
The longest submarine cables

The SeaMeWe-3 system from Norden in Germany to Kedge, South Korea connects 32 different countries with 39 landing points

SeaMeWe-3	39,000 km
Southern Cross	30,500 km
China-US	30,476 km
FLAG Europe-Asia	28,000 km
South America-1	25,000 km

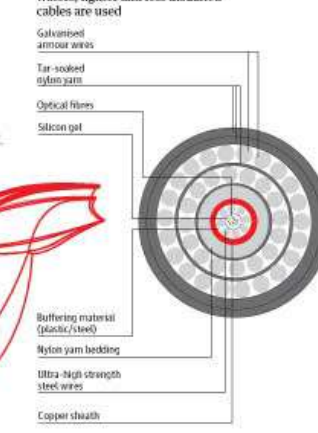
The world's cables in bandwidth

The first intercontinental telephony submarine cable system, TAT-1, connected North America to Europe in 1958 and had an initial capacity of 640,000 bytes per second. Since then, total trans-Atlantic cable capacity has soared to over 7 trillion bps

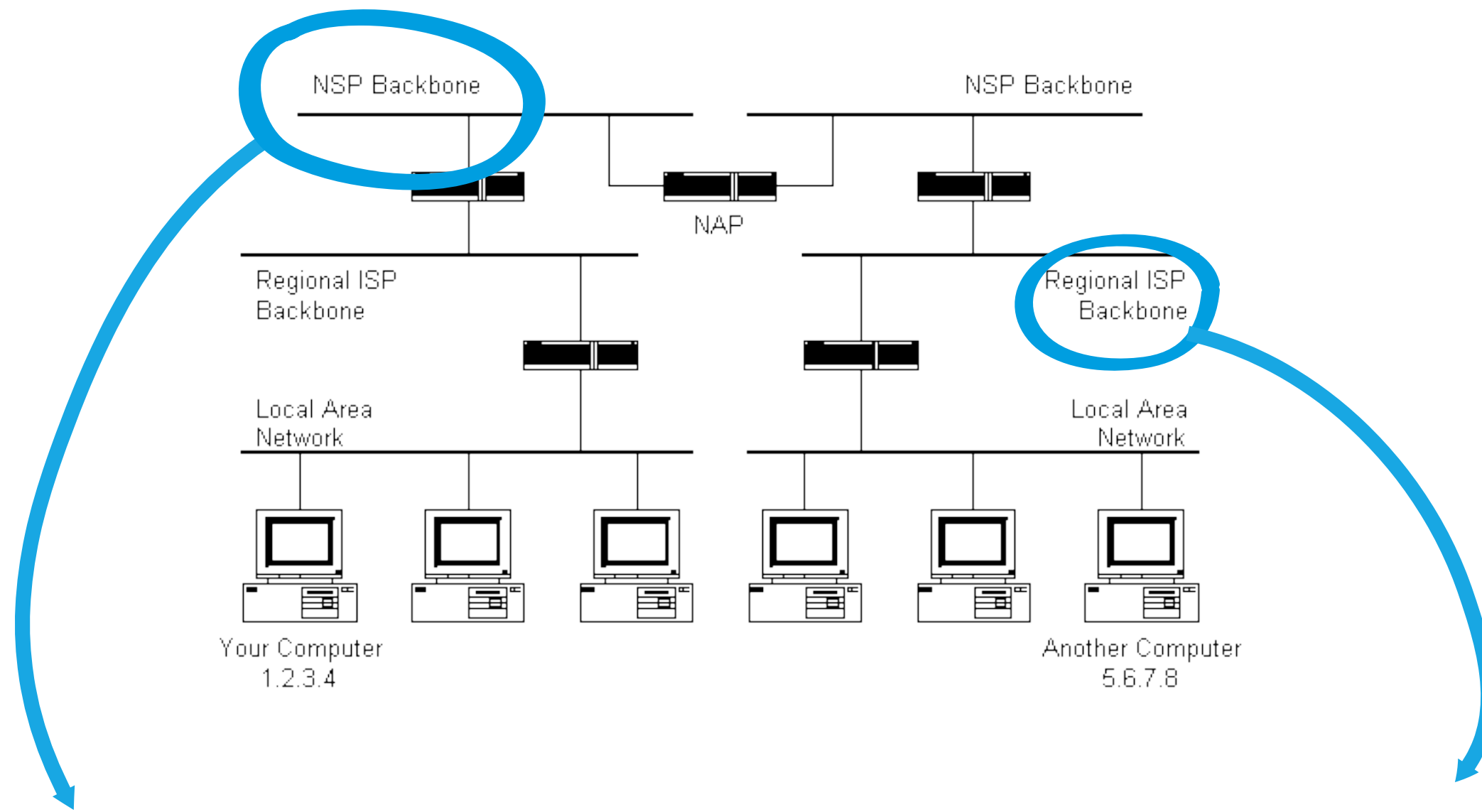


Cross-section of a cable

Cables of this strength are typically 60 mm in diameter and weigh over 10,000 kilograms a kilometer. In deeper waters, lighter and less insulated cables are used

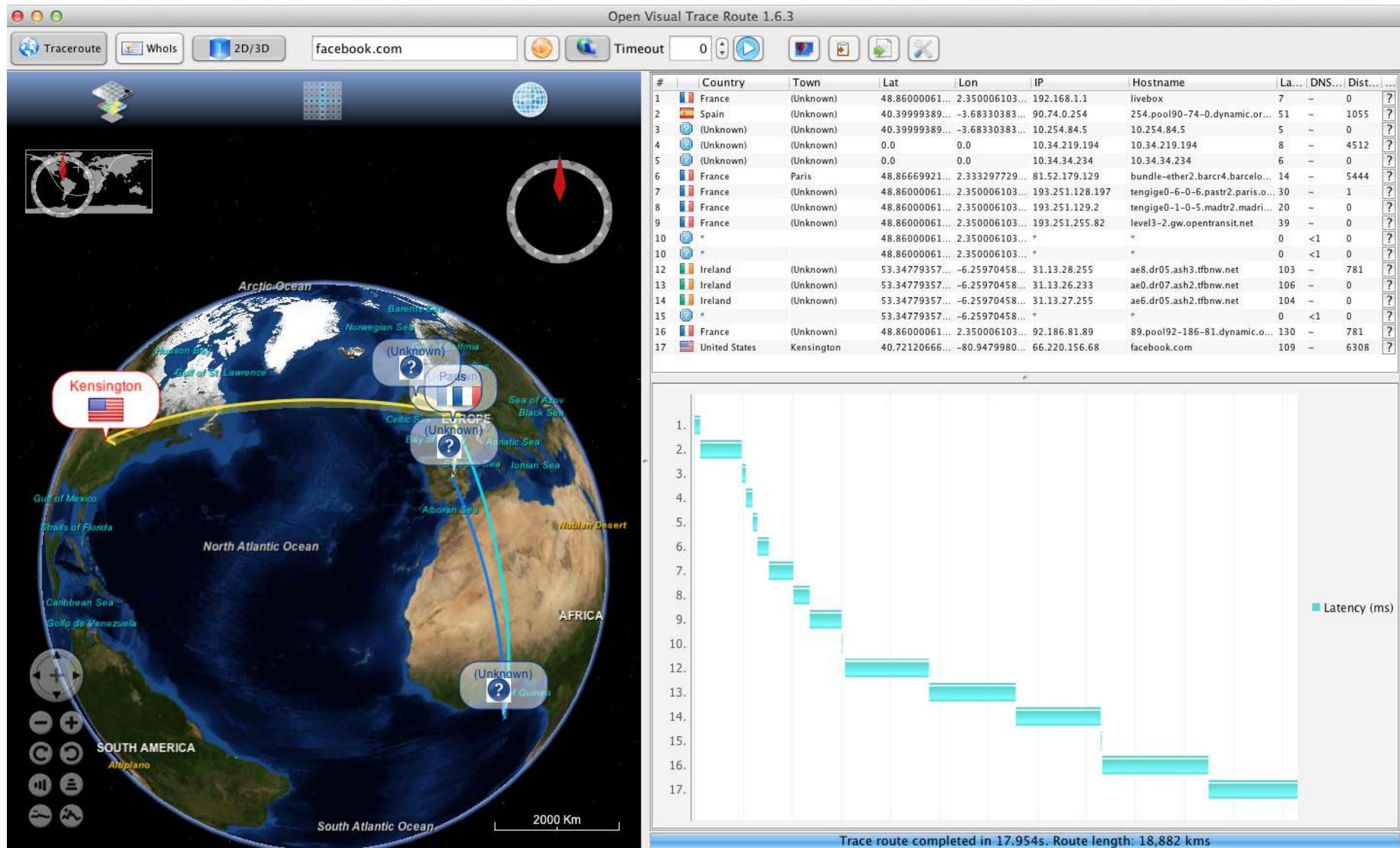


SOURCE: THE BROADBAND WORLDWIDE CABLE MAP 2008. INTERNET STATISTICS FROM INTERNETSTATISTICS.COM



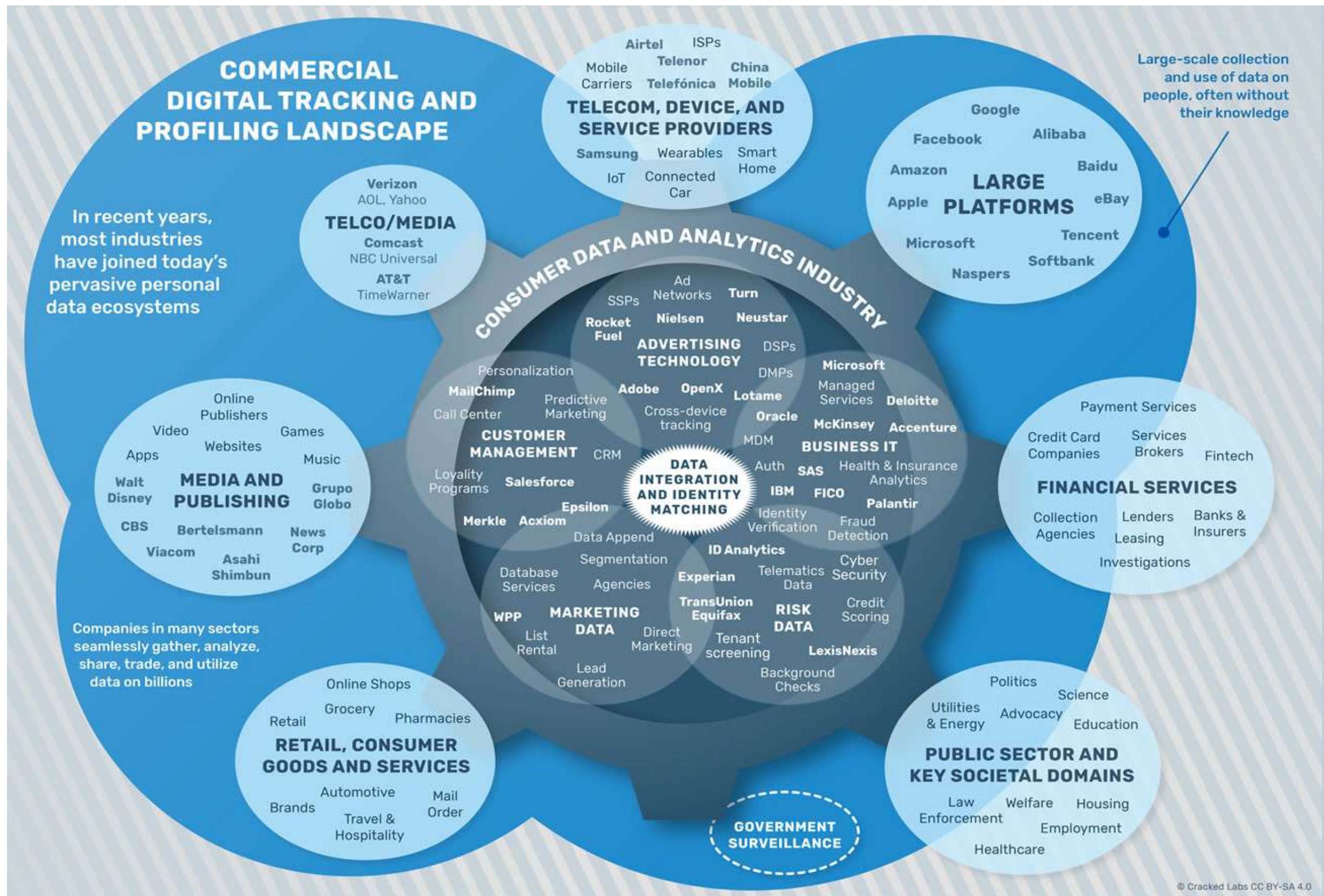
NSP UUNET; NTT; PRINT; LEVEL3; AT&T

ISP ORANGE; O2; VODAFONE



<https://sourceforge.net/projects/openvisualtrace/>

<http://citizen-ex.com/citizenship>





ONLINE TRACKING

The process of collecting data, anonymously, of the identity, preferences, interests, and so on... of a user. This mechanism is widely used by companies called "Data Brokers". This information is being obtained through cookies and other technologies.

LATE 19TH CENTURY // STATISTICAL INDIVIDUALS

Life Insurance companies started to predict people's lives and relative risk of death, to **quantify, sort** and to **rate** them.

1981 // LOYALTY PROGRAMS

American Airlines introduced **AAdvantage** program in 1981. Companies not just had "customer's names and addresses", but also "began to collect detailed personal and purchasing information".

1994 // COOKIES

Surfing the net went from being a relatively **anonymous activity**, to become a place where "records of one's transactions, movements and even desires could be stored, sorted, mined and sold".

DATA BROKERS

Companies that anonymously collect public and private information about the user. This information may include IP addresses, credit card numbers, google searches, shopping history, browsing habits and so on. These companies use this data to create individual profiles of a user and sell them to other companies.

BROWSER & WEBSITES // FINGERPRINT, COOKIES, USAGE PATTERNS

WEB SEARCHES // SEARCH QUERIES

SMARTPHONE // APP USAGE, CALL & SMS LOGS, BLUETOOTH, WIFI, GPS

MOUSE // USAGE PATTERNS

KEYBOARD // TYPING RYTHM PATTERNS

WEARABLES // HABITS

INTERNET OF THINGS // HABITS

PUBLIC INSTITUTIONS // PUBLIC RECORDS

<https://www.affectiva.com/>

<https://www.hotjar.com/>

<https://cignifi.com/>

<http://www.beyondverbal.com/>

<https://www.silverpush.co/>

<https://personality-insights-demo.ng.bluemix.net/>

<https://www.crystalknows.com/>

ACXIOM | [HTTP://WWW.ACXIOM.COM/](http://www.acxiom.com/)

ANSIRA | [HTTP://WWW.ANSIRA.COM/](http://www.ansira.com/)

WUNDERMAN | [HTTP://WUNDERMAN.COM](http://wunderman.com)

EPSILON | [HTTP://WWW.EPSILON.COM/](http://www.epsilon.com/)

EXPERIAN | [HTTPS://WWW.EXPERIAN.COM/](https://www.experian.com/)

MERKLE | [HTTP://WWW.MERKLEINC.COM](http://www.merkleinc.com)

RAPP | [HTTP://WWW.RAPP.COM](http://www.rapp.com)

PRECISION DIALOGUE | [HTTP://WWW.PRECISIONDIALOGUE.COM](http://www.precisiondialogue.com)

HARTE HANKS | [HTTP://WWW.HARTEHANKS.COM](http://www.hartehanks.com)

YES LIFECYCLE MARKETING | [HTTP://WWW.YESLIFECYCLEMARKETING.COM](http://www.yeslifecyclemarketing.com)

ACXIOM // **700 MILIONS USERS 1270 GROUPS (SEGMENTS):**

SHOOTING STAR 36 to 45 years, wake up early and make footing, no children but married, they travel and like Seinfeld

WASTE little or none economic value

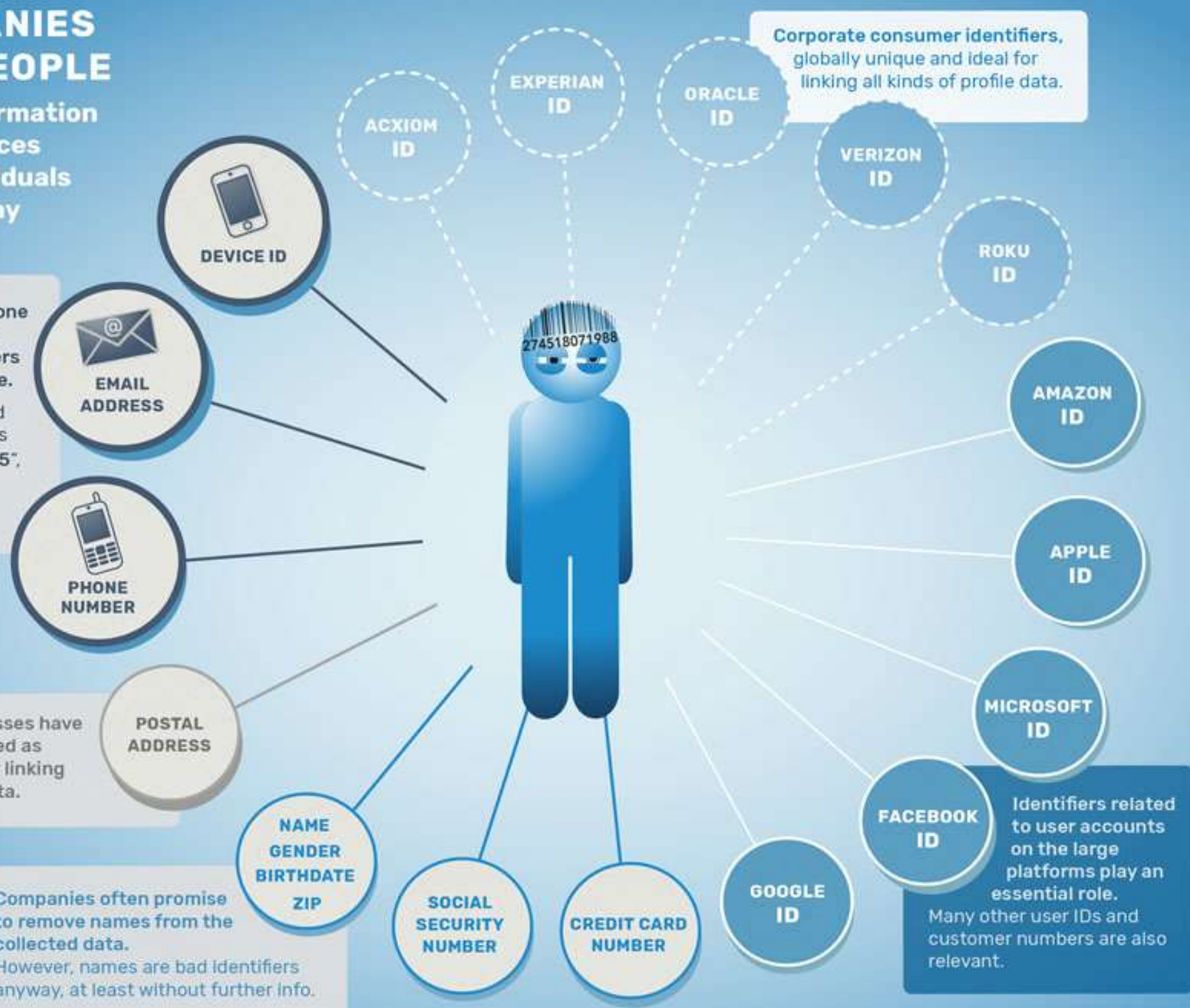
HOW COMPANIES IDENTIFY PEOPLE

to link profile information from various sources and monitor individuals throughout the day

Email addresses and phone numbers are among the most important identifiers used to recognize people. They are often converted into pseudonyms such as "e907c95ef289bxw2345", which can still serve as personal ID numbers.

Postal addresses have long been used as key nodes for linking consumer data.

Companies often promise to remove names from the collected data. However, names are bad identifiers anyway, at least without further info.



Many other kinds of temporary identifiers are used to track people across websites, platforms and devices:



People can also be (re)identified through calculating digital fingerprints from behavioral data:



Committed Online Spenders — Life-Stage Perspective

Cluster #	Cluster Name	Annual Online Spending > \$1,000*	Marital Status	Children	Age	Urbanicity
01	Summit Estates	207	Married	School-age	36-55	City & Surrounds
06	Shooting Stars	190	Married/Single	No Kids	30-45	Suburbs & Towns
10	Hard Chargers	187	Single	No Kids	30-45	Suburbs & Towns
02	Established Elite	184	Married/Single	No Kids	46-65	City & Surrounds
29	City Mixers	184	Single	No Kids	36-45	Downtown Metro
12	Tots & Toys	183	Married	Toddlers/Preschool	30-45	Suburbs & Towns
03	Corporate Clout	182	Single/Married	No Kids	46-65	City & Surrounds
18	Married Sophisticates	180	Married	No Kids	30-35	Suburbs & Towns
11	Kids & Clout	177	Married	School-age	36-45	Suburbs & Towns
04	Skyboxes & Suburbans	172	Married	School-age	36-55	Suburbs & Towns
07	Leveraged Lifestyles	162	Married	School-age	36-55	Suburbs & Towns
05	Sitting Pretty	158	Married	No Kids	46-65	Suburbs & Towns
20	Dynamic Duos	146	Married	No Kids	36-45	Suburbs & Towns
22	Fun & Games	136	Married	No Kids	46-55	Suburbs & Towns
26	Savvy Singles	135	Single	No Kids	30-45	City & Surrounds
13	Solid Single Parents	127	Single Parent	School-age	36-55	City & Surrounds
16	Country Single	127	Single	No Kids	36-65	Rural
24	Career Building	126	Single	No Kids	24-29	City & Surrounds
08	Full Steaming	124	Married/Single	No Kids	56-65	Suburbs & Towns
21	Children First	123	Married/Single Parents	Age Mix	24-29	Suburbs & Towns
35	Solo and Stable	122	Single	No Kids	36-45	City & Surrounds
27	Soccer & SUVs	120	Married	School-age	36-45	City & Surrounds
30	Spouses & Houses	120	Married	No Kids	24-29	Suburbs & Towns

* Index of 120 or larger reflects above-average likelihood of having spent \$1,000 or more online in the past 12 months.

PERSONICK LIFESTAGE ANALYSIS

Market: DTI Markets

PERSONICK LIFESTAGE SEGMENTS	Total HHLDs	% of Market	Active	Former	Never	% of Actives	HH Penetration	Active Index	Prospects	Annual Retention
20S - Active Elders	129,850	8.6%	28,614	7,905	93,331	22.0%	22.0%	181.7	101,236	55.7%
21S - Leisure Buffs	92,716	6.2%	20,145	5,844	66,727	21.7%	21.7%	179.2	72,571	45.4%
18M - Mature Rustics	30,832	2.0%	6,429	1,743	22,660	20.9%	20.9%	172.0	24,403	49.8%
19M - Golden Years	112,340	7.5%	21,314	6,681	84,345	19.0%	19.0%	156.5	91,026	43.4%
15M - Mature Wealth	88,745	5.9%	15,265	5,091	68,389	17.2%	17.2%	141.8	73,480	41.7%
16M - Aging Upscale	76,166	5.1%	11,394	4,500	60,272	15.0%	15.0%	123.4	64,772	35.9%
11B - Fortune & Families	172,793	11.5%	21,212	11,051	140,530	12.3%	12.3%	101.2	151,581	37.8%
13B - True Blues	43,354	2.9%	4,655	2,770	35,929	10.7%	10.7%	88.5	38,699	41.2%
03X - Transition Time	23,999	1.6%	2,349	1,531	20,119	9.8%	9.8%	80.7	21,650	30.9%
14B - Our Turn	67,517	4.5%	6,610	4,010	56,897	9.8%	9.8%	80.7	60,907	31.3%
12B - Flush Families	145,177	9.6%	13,757	9,608	121,812	9.5%	9.5%	78.1	131,420	34.5%
17M - Modest Means	78,038	5.2%	7,243	4,642	66,153	9.3%	9.3%	76.5	70,795	26.1%
08X - Jumbo Families	87,738	5.8%	6,987	6,292	74,459	8.0%	8.0%	65.7	80,751	36.3%
09B - Middling Singles	12,786	0.8%	836	717	11,233	6.5%	6.5%	53.9	11,950	26.4%
10B - Mixed Middlers	55,623	3.7%	3,639	3,445	48,539	6.5%	6.5%	54.0	51,984	27.7%
07X - Cash & Careers	77,532	5.1%	4,313	4,483	68,736	5.6%	5.6%	45.9	73,219	29.3%
02Y - Taking Hold	52,514	3.5%	2,674	3,202	46,638	5.1%	5.1%	42.0	49,840	26.6%
05X - Family Focused	44,901	3.0%	2,245	2,989	39,667	5.0%	5.0%	41.2	42,656	27.2%
04X - Flying Solo	39,992	2.7%	1,133	2,325	36,534	2.8%	2.8%	23.4	38,859	17.2%
06X - Mixed Singles	14,618	1.0%	411	696	13,511	2.8%	2.8%	23.2	14,207	13.0%
01Y - Beginnings	59,973	4.0%	1,544	3,482	54,947	2.6%	2.6%	21.2	58,429	15.0%
TOTAL ALL SEGMENTS	1,507,204	100.0%	182,769	93,007	1,231,428	12.1%	12.1%	100.0	1,324,435	37.6%

DRA Post Elect 2016 All Scores 1-12-17.yxdb

RNC_RegID	State	2012ObamaVoter_DRA_12_16	2012RomneyVoter_DRA_12_16	2016ClintonVoter_DRA_12_16	2016TrumpVoter_DRA_12_16	AmericaFirstForeignPolicy_agree_DRA_...
341E-4846-9310-B219917E9098}	AK	0.063016	0.571314	0.053027	0.551194	0.602687
D7F2-4988-A7E0-E33CA71D52BE}	AK	0.053668	0.707244	0.050368	0.710313	0.481612
500A-4EA4-81DC-AF10470EF8D5}	AK	0.084098	0.366629	0.084682	0.501998	0.377841
BD6D-463D-9003-FFFB4A692794}	AK	0.055057	0.806223	0.04669	0.744124	0.479264
-4697-44B1-A9B7-4CFC3E84A585}	AK	0.066218	0.469906	0.061771	0.603631	0.484545
DB33-408E-938F-342B31F67617}	AK	0.270389	0.145265	0.263194	0.292038	0.522196
585E-4CBD-89C6-3A85C741E7E7}	AK	0.310231	0.17945	0.277853	0.265422	0.44298
66FD-4E91-9E58-DEDF71C38DF6}	AK	0.703669	0.053965	0.708858	0.08392	0.313643
A32F-43F3-BCBC-47B650E08C9D}	AK	0.369562	0.130109	0.373402	0.24179	0.443629
5197-49F9-A32A-7F63A60A1B84}	AK	0.05925	0.797582	0.052514	0.773824	0.501335
1CD3-444D-8652-5029581AC85A}	AK	0.055432	0.706105	0.051108	0.755157	0.505331
-38CE-48B3-AA10-ECA4042ED488}	AK	0.058641	0.708128	0.049693	0.703338	0.506371
5C71-4CA5-A710-190A66391A42}	AK	0.052957	0.790685	0.051438	0.763825	0.51226
3766-47CB-8F61-92AC63AAF52A}	AK	0.364036	0.110677	0.355915	0.16711	0.365308
DA23-4FC7-93F0-E7A9A52E69D7}	AK	0.082728	0.343524	0.077666	0.532271	0.503128
34BD-46FF-AB03-AFEA5185E60D}	AK	0.722743	0.059612	0.708182	0.090227	0.335663
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3644-420A-A963-18E5F3539285}	AK	0.735005	0.058311	0.695729	0.090247	0.291987
427A-41D3-B6F2-6F474CFF81C2}	AK	0.373483	0.116216	0.366706	0.186676	0.45696
2286-4104-A8A8-275270AB52F8}	AK	0.263161	0.139509	0.241241	0.190059	0.343729
49BC-45DB-8D71-87362EB1DC2A}	AK	0.199837	0.233243	0.190505	0.437843	0.498198
-5818-4E8A-B577-381977BE9525}	AK	0.279332	0.171205	0.254128	0.246822	0.31401
7FC6-4A7A-B13C-F7DB3AA6AF17}	AK	0.064943	0.493935	0.059796	0.616545	0.495759
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-F460-4256-A5B5-E9AC73080C48}	AK	0.110371	0.254286	0.121428	0.343682	0.459141
FA96-4F4E-A8AA-8F3AAD8E20E5}	AK	0.481394	0.082207	0.469467	0.140254	0.336325
-8337-4394-B6D8-20E57DAA58E8}	AK	0.80217	0.06407	0.692983	0.088118	0.273626
68F7-41D9-BCC7-79E63D4D7EA9}	AK	0.053448	0.769965	0.050236	0.65751	0.5501
1931-446B-B95F-4552FA6C0FEA}	AK	0.091747	0.467848	0.101971	0.509767	0.420752
29D8-4047-82BE-5D9C7B24FAD6}	AK	0.178756	0.266768	0.155978	0.312251	0.46878
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DEE9-4CEA-8D4D-B29A222C4ABB}	AK	0.23698	0.234954	0.200402	0.293296	0.414051
1559-42DA-8F78-EC96E8A14AF4}	AK	0.057559	0.73754	0.05013	0.605205	0.493792

<http://bit.ly/2rQffgJ>

<https://www.upguard.com/breaches/the-rnc-files>

(O:) > dra-dw > dra-dw.s3.amazonaws.com > audiences >

in library ▾ Share with ▾ Burn New folder

Name	Date modified	Type
exon_mobile	6/12/2017 10:18 PM	File folder
tp_audiences_2017-01-13	6/13/2017 1:04 AM	File folder
tp_audiences_2017-01-25	6/13/2017 3:46 AM	File folder
tp_audiences_2017-02-02	6/13/2017 5:07 AM	File folder
tp_audiences_2017-02-10	6/13/2017 6:01 AM	File folder

K (O:) > dra-dw > dra-dw.s3.amazonaws.com > audiences > exon_mobile > raw

Share with ▾ Burn New folder

Name	Date modified	Type	Size
audiences.yxdb	3/6/2017 1:57 PM	Alteryx Database	11,973,760 ...
national_exxon_score_file.yxdb	3/6/2017 2:06 PM	Alteryx Database	25,941,482 ...
prepped_audiences_xom_AK.yxdb	3/1/2017 1:18 PM	Alteryx Database	20,440 KB
prepped_audiences_xom_AL.yxdb	3/1/2017 1:18 PM	Alteryx Database	159,539 KB
prepped_audiences_xom_AR.yxdb	3/1/2017 1:18 PM	Alteryx Database	88,673 KB

Alteryx Designer x64 - national_exxon_score_file.yxdb

182,746,897 records displayed, 19 fields, , 25 GB

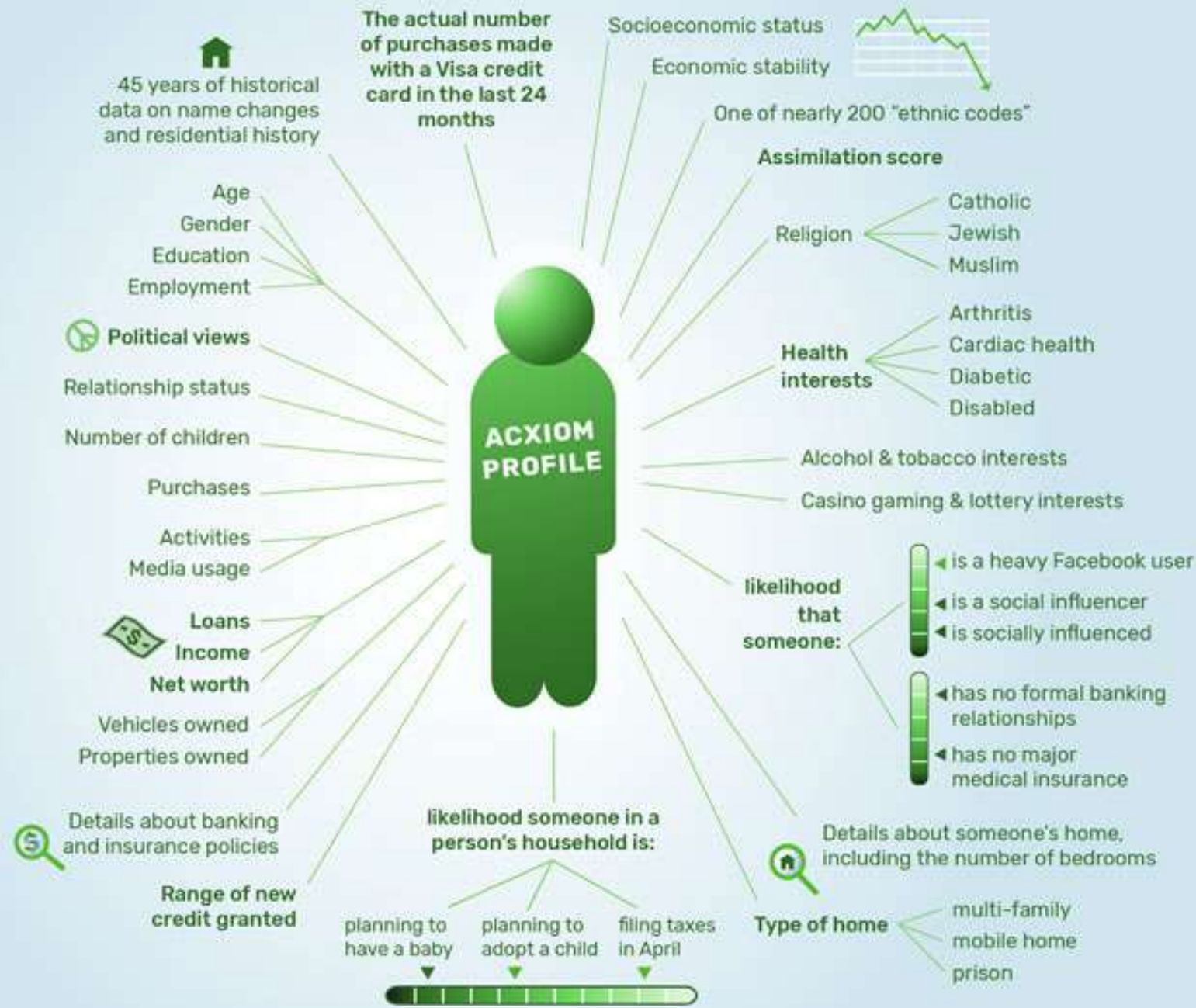
Table

19 of 19 Fields ▾ ✓ Cell Viewer ▾ ↑ ↓

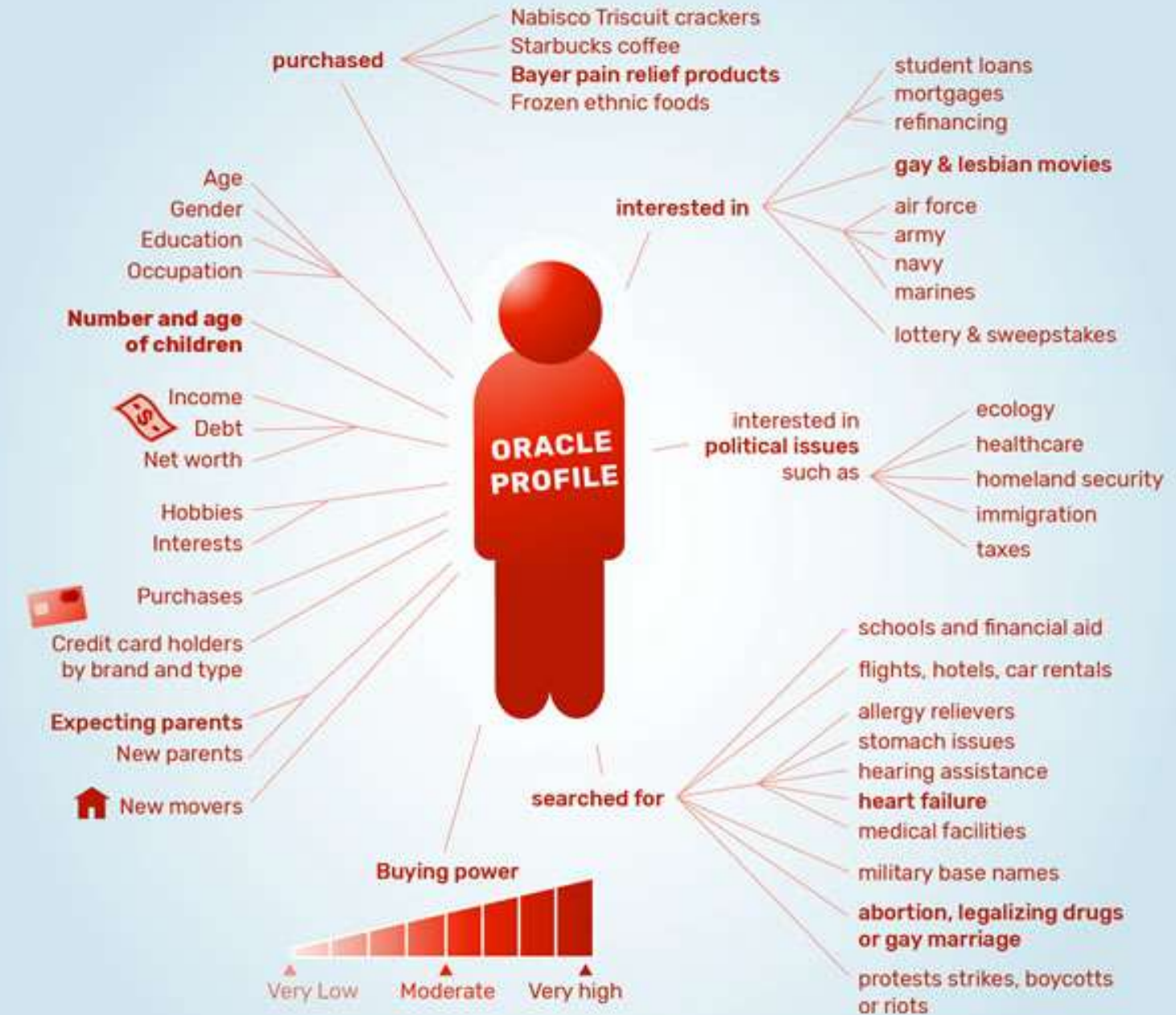
Record...	RNC_RegID	State	FIP55	CD_NextElection	FirstName	MiddleName	LastName	RegistrationAddr1	RegCity	RegSta
1	4519-9E00-AC45AF367C87}	TX	48113	30					DUNCANVILLE	TX
2	4EC0-9387-FAD707BF2740}	NC	37127	2					NASHVILLE	NC
3	417B-AFCB-CC1BEA49D8D5}	SC	45077	3					EASLEY	SC
4	4870-92C8-700AB66F1D74}	NC	37023	11					CONNELLYS SPRINGS	NC
5	4492-BCDF-5B93F1813066}	PA	42007	12					CONWAY	PA
6	4030-B1AC-C611A17EACB6}	LA	22109	6					HOUMA	LA
7	4684-A25E-CD67EE63BBDC}	FL	12083	11					OCALA	FL
8	4FDA-898F-752CC614D27C}	MD	24033	4					CAPITOL HEIGHTS	MD
9	43D7-A197-C0B89F432A3C}	NV	32031	2					RENO	NV
10	4F8C-BBE7-3DA5473DB92D}	WA	53017	8					EAST WENATCHEE	WA
11	4208-B754-96E90D9EF3F3}	VA	51760	4					RICHMOND	VA
12	40CB-8B46-556936DEE6C1}	VA	51177	7					SPOTSYLVANIA	VA
13	44EE-9C00-CD797CB89F47}	IA	19183	2					WASHINGTON	IA
14	4F27-B3A3-6D4B4F8E24C8}	OH	39005	7					NOVA	OH
15	4DF7-8E79-27ED3450308A}	TX	48091	21					NEW BRAUNFELS	TX

DATA BROKERS HAVE EXTENSIVE PROFILE INFORMATION ON ENTIRE POPULATIONS

Examples of data on consumers provided by Acxiom and Oracle

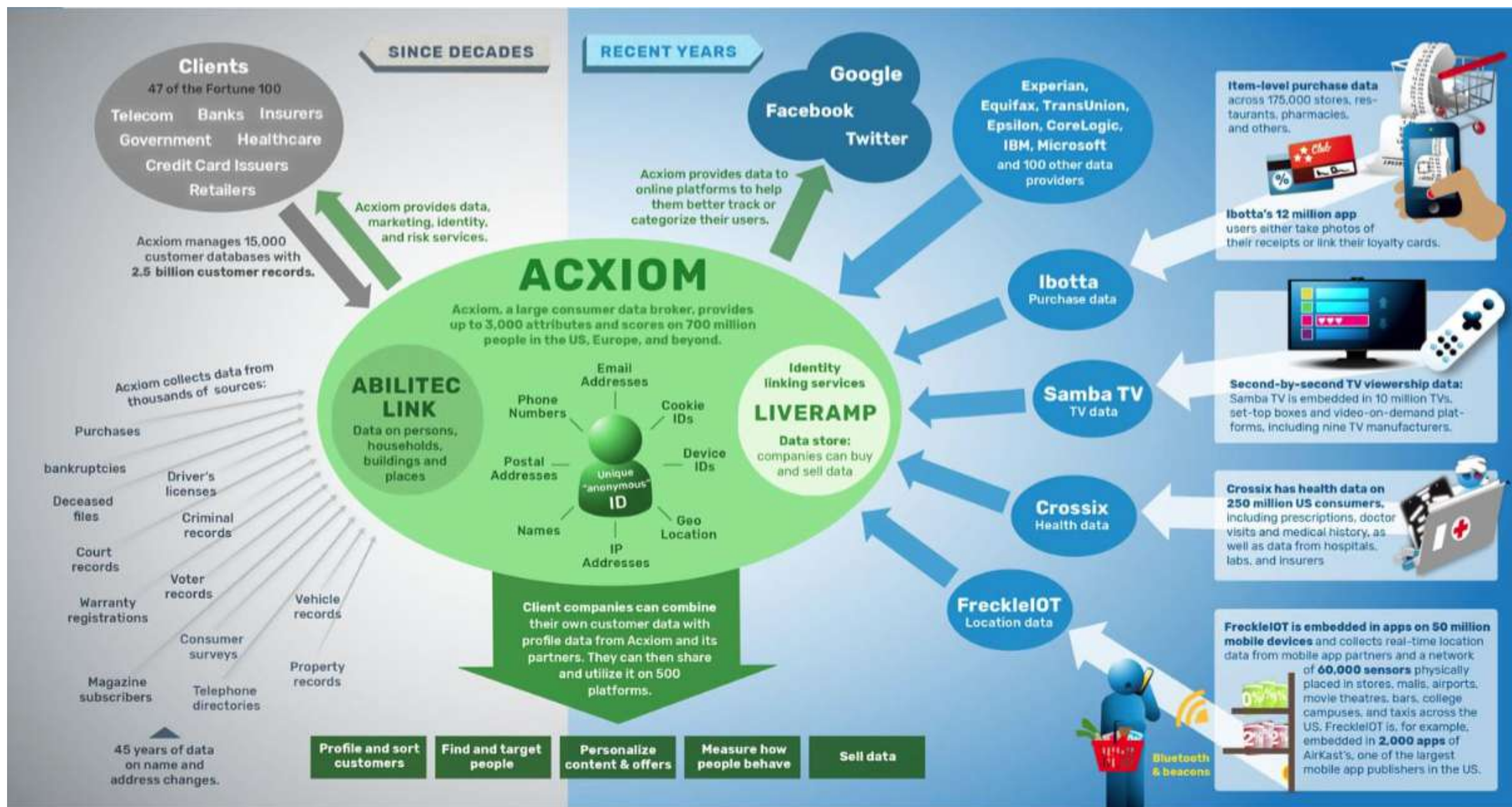


Acxiom provides up to 3,000 attributes and scores on 700 million people in the US, Europe, and other regions.

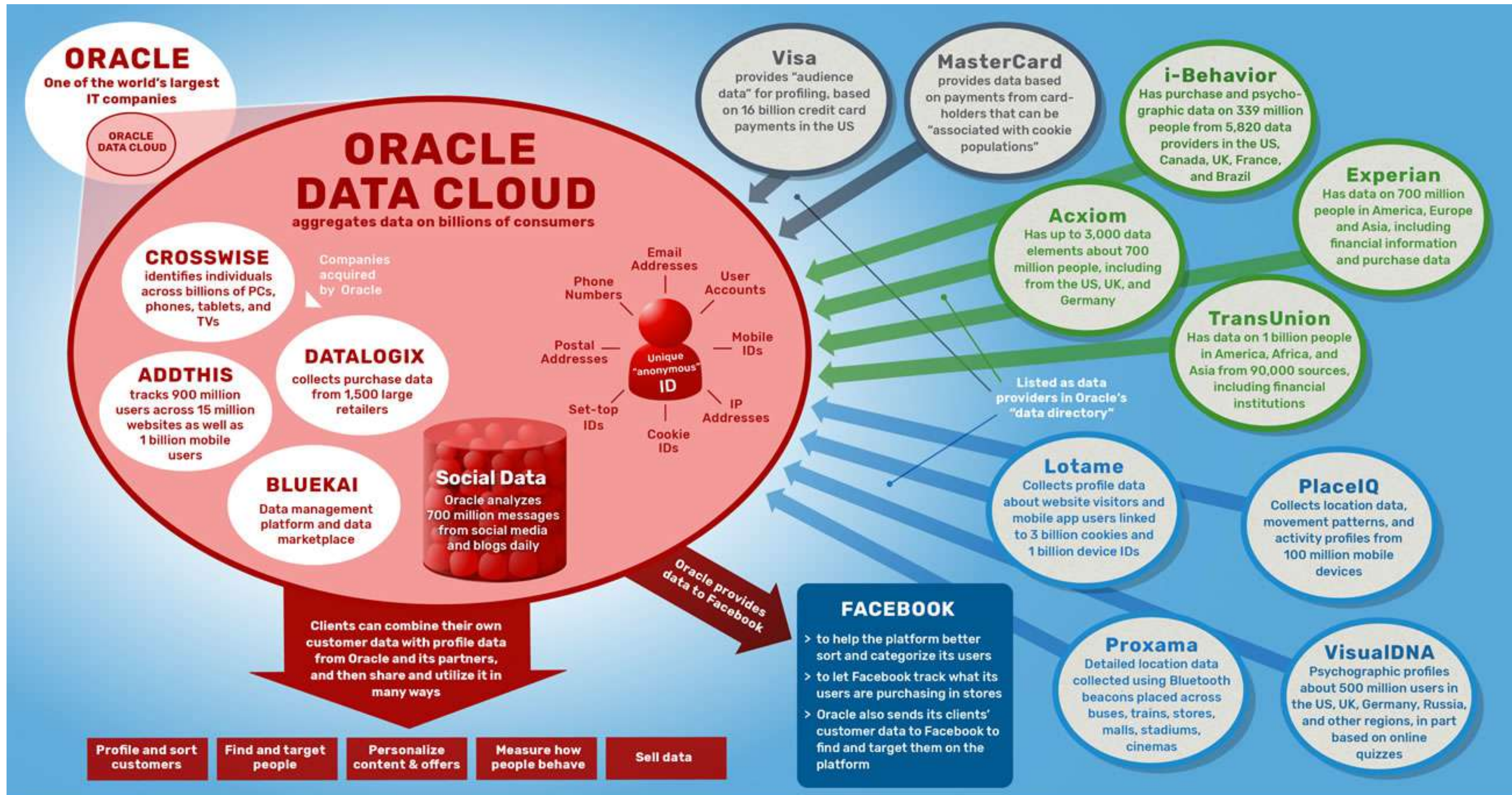


Oracle sorts people into thousands of categories and provides > 30,000 attributes on 2 billion consumer profiles

© Cracked Labs CC BY-SA 4.0, April/May 2017. Disclaimer: the mentioned companies typically keep information about their activities secret. This illustration is based on publicly available information by Acxiom and Oracle. Every effort has been made to accurately interpret and represent the companies' activities, but we cannot accept any liability in the case of eventual errors. Sources: Acxiom annual reports, developer website (API docs), Oracle press release, help center website, audience playbook, taxonomy updates for January, 2017 [Excel document]. For details about the sources see the report "Corporate Surveillance in Everyday Life".



© Cracked Labs CC BY-SA 4.0, April/May 2017. Disclaimer: the mentioned companies typically keep information about their activities secret. This illustration is based on publicly available information, mainly the companies' own statements. Every effort has been made to accurately interpret and represent the companies' activities, but we cannot accept any liability in the case of eventual errors. Sources: Acxiom website, press releases, brochures, annual reports, and response to US congress inquiry. LiveRamp website, brochures, press releases, presentations. Ibotta website. Crossix website, press releases. FreckleIOT press releases. For details about the sources see the report "Corporate Surveillance in Everyday Life".



© Cracked Labs CC BY-SA 4.0, April/May 2017. Disclaimer: the mentioned companies typically keep information about their activities secret. This illustration is based on publicly available information, mainly the companies' own statements. Every effort has been made to accurately interpret and represent the companies' activities, but we cannot accept any liability in the case of eventual errors. Sources: Oracle website, press releases, data directory, brochures, presentations, MasterCard website, Acxiom annual report, TransUnion annual report, Lotame website, VisualDNA brochure, Facebook website, ProPublica article. For details about the sources see the report "Corporate Surveillance in Everyday Life".

Large Online Platforms			
Facebook	has profiles on	<u>1.9 billion</u>	Facebook users
		<u>1.2 billion</u>	Whatsapp users
		<u>600 million</u>	Instagram users
Google	has profiles on	<u>2 billion</u>	Android users
		<u>1+ billion</u>	Gmail users
		<u>1+ billion</u>	YouTube users
Apple	has profiles on	<u>1 billion</u>	iOS users
Credit Reporting Agencies			
Experian	has credit data on	<u>918 million</u>	people
	marketing data on	<u>700 million</u>	people
	„insights“ on	<u>2.3 billion</u>	people
Equifax	has data on	<u>820 million</u>	people
		<u>1 billion</u>	devices
TransUnion	has data on	<u>1 billion</u>	people
Consumer Data Brokers			
Acxiom	has data on	<u>700 million</u>	people
		<u>1 billion</u>	cookies and mobile devices
	it manages	<u>3.7 billion</u>	consumer profiles for clients
Oracle	has data on	<u>1 billion</u>	mobile users
		<u>1.9 billion</u>	website visitors
	provides access to	<u>5 billion</u>	“unique” consumer IDs

NEXMARK | [HTTP://WWW.NETXMARK.COM/](http://www.netxmark.com/)

DMDATABASES | [HTTP://WWW.DMDATABASES.COM/](http://www.dmdatabases.com/)

USDATE | [HTTP://USDATE.ORG](http://usdate.org)

PREDICTIVE ANALYTICS

“encompasses a variety of statistical techniques from predictive modeling, machine learning, and data mining that analyze current and historical facts to make predictions about future or otherwise unknown events. In business, predictive models exploit patterns found in historical and transactional data to **identify risks and opportunities**. Models capture relationships among many factors to allow assessment of risk or potential associated with a particular set of conditions, **guiding decision making** for candidate transactions.”

The analysis of personal traits based on digital records, often applies the **“BIG FIVE”** model, one of the leading models of personality psychology.

According to the “Big Five” model, every person can be rated along five dimensions:¹⁹

Personality Dimension	People who are rated as high in this dimension could be
Extraversion	Active, assertive, energetic, enthusiastic, outgoing, talkative
Agreeableness	Appreciative, forgiving, generous, kind, sympathetic, trusting
Conscientiousness	Efficient, organized, planful, reliable, responsible, thorough
Neuroticism	Anxious, self-pitying, tense, touchy, unstable, worrying
Openness	Artistic, curious, imaginative, insightful, original, wide interests

Table 1: The five dimensions of the “Big Five” personality model. Source: McCrae and Joh 1992.

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Table 1: The five dimensions of the “Big Five” personality model. Source: McCrae and Joh 1992.

PHONE METADADA

“A Swiss study in collaboration with Nokia Research showed that “Big Five” personality traits can be predicted based on smartphone metadata with an accuracy of up to 75,9%”.

Smartphone usage		Emotional Stability	Extra-version	Open-ness	Conscientious-ness	Agreeable-ness
Apps most frequently used:	Office	- 0.23		- 0.26		- 0.18
	Calender	- 0.16		- 0.18		- 0.18
	Internet		- 0.26	- 0.15		
	Camera		- 0.15			
	Video/Music				-0.18	
Calls received		0.15	0.13			0.20
Ø duration of incoming calls			0.18	0.12		
Missed calls				- 0.12		
Unique contacts called						0.17
Unique contacts SMS sent to					-0.13	- 0.13
Ø word length (sent)		0.14	- 0.15			

Table 3: Pairwise correlations between features and traits having $p < 0.01$, ranked by absolute value of r
Source: Chittaranjan et al 2011

RECLAMATE

“Reclamate is a mobile application and dashboard that uses gamification and advanced analytics to integrate the most effective anti-recidivism programs on the market today. A safer, cheaper alternative to traditional prisons and wants to give offenders access to a variety of services while monitoring their actions and encouraging pro-social behaviors”.



GOOGLE & GENOMICS

23andme + Pfizer made the largest study on genetic markers associated with depression taking DNA data from more than 450,000 23andMe customers.

<https://www.23andme.com/>

ALPHABET & PHARMACEUTICAL INDUSTRY

“ALPHABET + GlaxoSmithKline. Founded a \$715m company to focus on the new field of bioelectronics, which involves developing miniature electrical implants capable of treating a number of chronic diseases”.

FITBIT & CORPORATE WELLNESS PROGRAMS

Activity trackers are sold to companies at quantity discounts to “increase employee productivity”, “get employees more active, and potentially reduce healthcare costs”. Fitbit claims that serves 50 of the 500 most powerful corporations in the globe, including British Petroleum, Barclays, Bank of America and Time Warner.

<https://www.fitbit.com/es>

ONLINE LEAD GENERATION

A business based on “selling pieces of evidence that a consumer is interested in a product or service”.
“**Lead generators** encourage consumers to provide information about themselves and often sell consumers’ data to businesses that **offer risky financial products and other controversial services**”.
They collect “sensitive financial information from vulnerable and often desperate consumers” to offer them, for example, payday loans.

PRICING & SEARCH DISCRIMINATION

“**Pricing discrimination** is defined as the practice of **pricing the same product differently** to different buyers in real time, depending on an assumed maximum price, which a particular customer possibly would pay.”

Search discrimination: different users **see different products**, when browsing an online shop or certain product categories. For example, some users may see more expensive hotels than others on the top of the list.

ACCES TO CREDIT

Credit Scoring models are based on “thousands of raw data elements including third-party data and data collected from borrowers”. In order to have access to loans your most private details will need to be exposed to Big Data algorithms and big corporations.

INSURANCE POLICIES

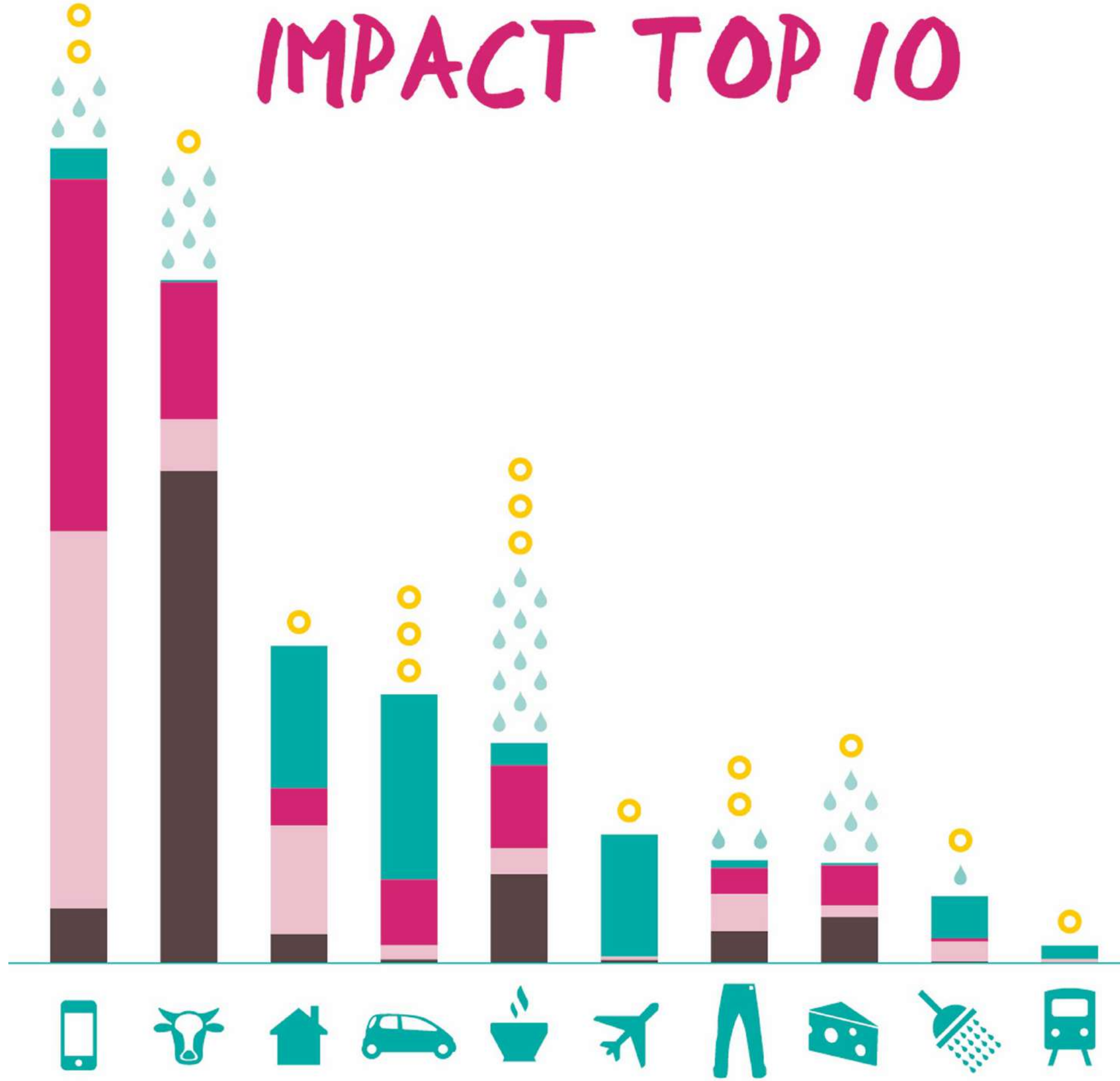
Increasing tendency of providing **wearables** to customers can lead to:

- _People who don't want to participate could be **penalized**.
- _Activity data or health scores can be **sold** or disclosed to **third parties**.
- _People who can't achieve **goals** might have to pay **higher policies**.

FUTURE DYSTOPIAS

- _Acces to **education**
- _Acces to **food** and **energy resources**

IMPACT TOP 10





Cobalt lithium-ion batteries, synthetic fuels.

Gallium thin layer photovoltaics, IC, WLED.

Indium displays, thin layer photovoltaics.

Tantalum microcapacitors, medical technology.

Antimony ATO, microcapacitors.

Platinum fuel cells, catalysts.

Palladium catalysts, seawater desalination.

Niobium microcapacitors, ferroalloys.

Neodymium permanent magnets, laser technology.

Germanium fiber-optic cable, IR optical technologies.





SALAR DE UYUNI, BOLIVIA

50% to 70% of the world's lithium reserves, which is in the process of being extracted



BAYAN OBO, CHINA

December 21st 2010

Bayan Obo rare earth mines contain
70% of the world's reserves



CONGO

More than 60% of the world's supply of cobalt is mined in the “copper belt” of the south-eastern provinces of DRC.

<https://www.theguardian.com/global-development/2018/oct/12/phone-misery-children-congo-cobalt-mines-drc>



BAYAN OBO, CHINA

9,600 to 12,000 cubic meters (340,000 to 420,000 cubic feet) of waste gas—containing dust concentrate, hydrofluoric acid, sulfur dioxide, and sulfuric acid—are released with every ton of rare metals that are mined. Approximately 75 cubic meters (2,600 cubic feet) of acidic wastewater, plus about a ton of radioactive waste residue are also produced.



BAOTOU, MONGOLIA

The world's largest rare earth mineral refinery pumps toxic and radioactive tailings into an adjacent artificial lake.



UNKNOWN FIELDS

Amount of toxic waste derived from the production of 1 smartphone, 1 laptop and 1 car battery.

1 MB = 7,072gr CO₂

3/4G 1 MB = 35,36gr CO₂



1 milion views of the “Avatar” trailer on Youtube // 49.942 kWh // 65.202 lignite briquettes with // 54 tons of CO2
[AVATAR, MICHAEL SAUP | <http://www.z-n-e.info/?root=2&sub=0&id=260&pic=1&lang=en>]

3G/4G = 2GB/ Month

5G = 30GB/ Month

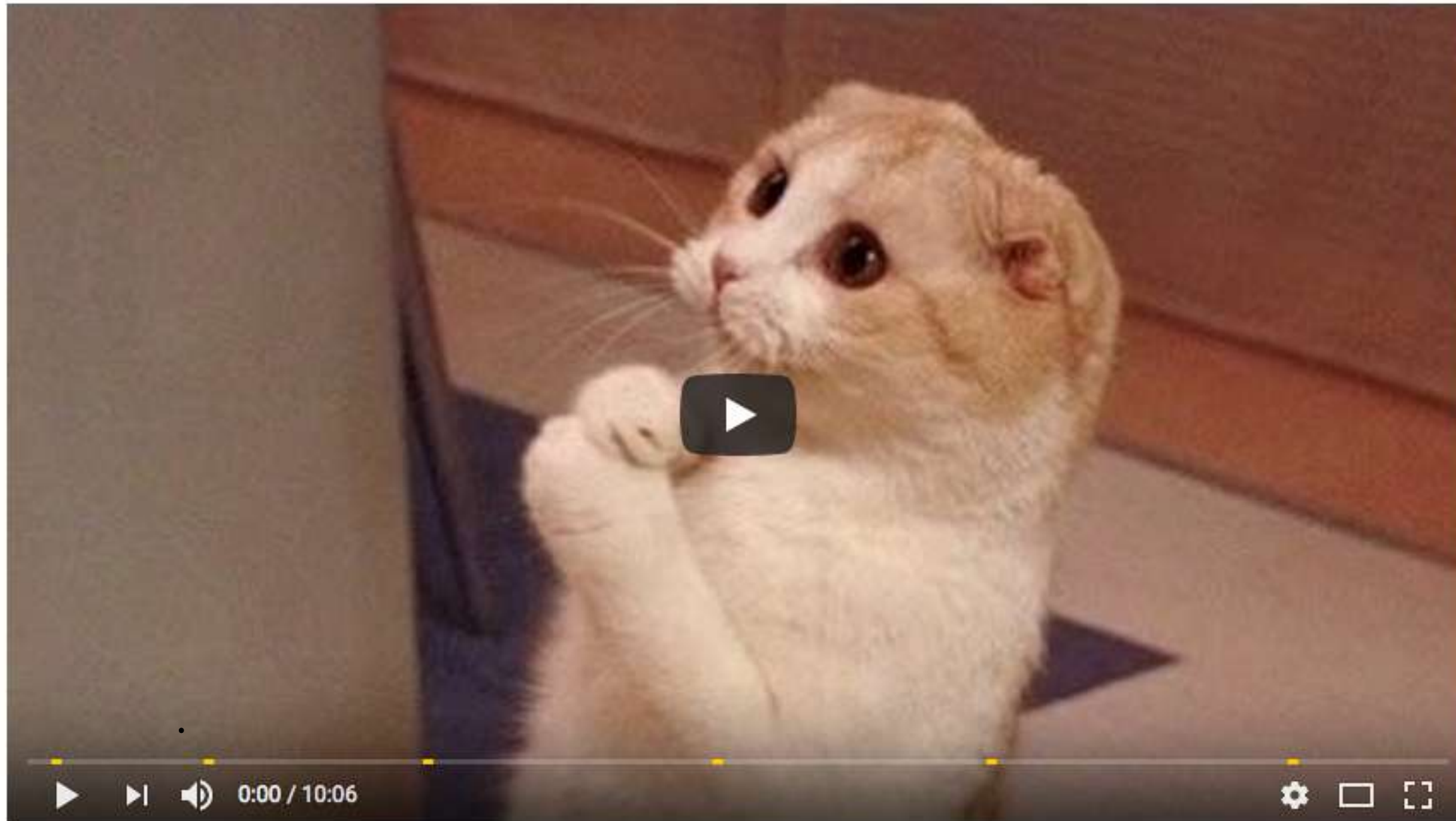
The number of devices connected to IP networks will be more than **three times the global population** by 2020.

It would take more than **5 million years** to watch the amount of **video** that will cross global IP networks **each month in 2020**. Every **second**, a **million minutes of video** content will cross the network by 2020.



YouTube^{ES}

Search



Cats are so funny you will die laughing - Funny cat compilation

62,843,424 views

👍 215K 💬 25K ➦ SHARE ⋮

https://www.fastcompany.com/90360528/the-code-that-powers-our-lives-has-a-hidden-environmental-toll?partner=rss&utm_source=rss&utm_medium=feed&utm_campaign=rss+fastcompany&utm_content=rss?cid=search

Watching videos of cats in youtube equals **1g of CO2** for every **10 minutes** of viewing

Youtube' **anual energy consumption** it's equivalent to that of a **small city** like Frankfurt or Glasgow, Scotland, over the course of a year.

FACEBOOK ALGORITHMIC FACTORY

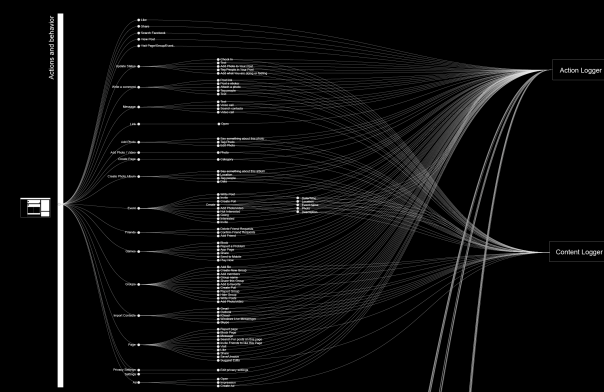
DATA COLLECTION

STORAGE

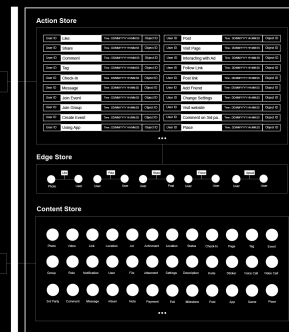
ALGORITHMIC PROCESSING

TARGETING

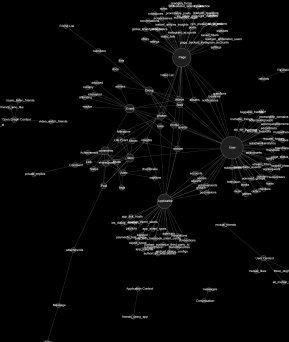
ACTIONS AND BEHAVIOR



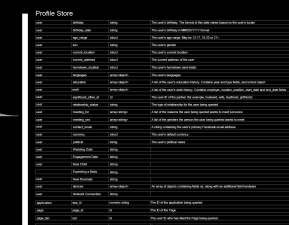
ACTION & CONTENT STORE



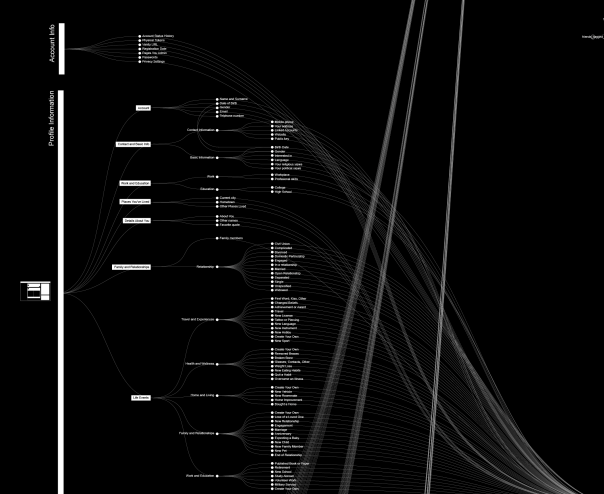
SOCIAL GRAPH



PROFILE STORE



ACCOUNT & PROFILE INFORMATION



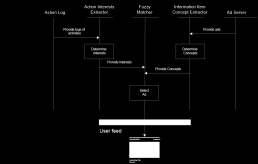
DATA COLLECTION : ONLINE TRACKERS



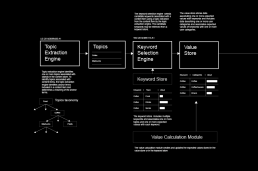
DATA COLLECTION : DEVICE INFORMATION



SELECTING USER INTERACTION DATA



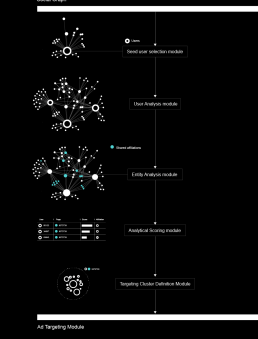
EXTRACTING USER INTERESTS FROM THE CONTENT



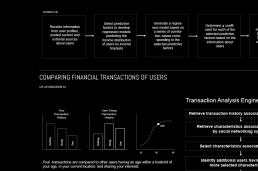
TARGETING BASED ON EVENTS



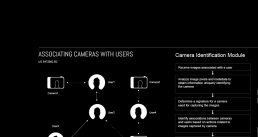
TARGETING BASED ON THE SOCIAL CONNECTIONS



INFERRING USER INTERESTS FROM BEHAVIOR



ASSOCIATING LOCATION WITH BEHAVIOR

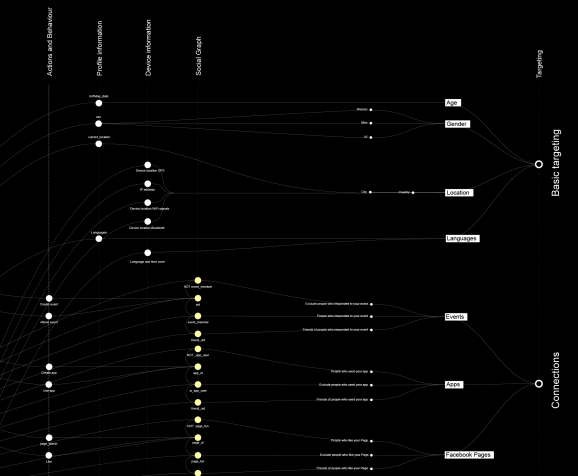


INTEREST AND BEHAVIOR

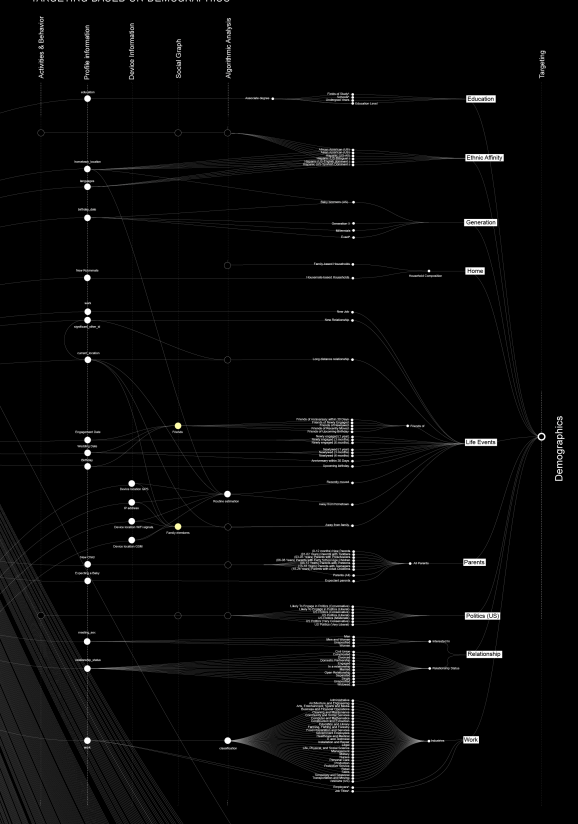
BEHAVIOR

INTEREST

BASIC AND TARGETING BASED ON CONNECTIONS



TARGETING BASED ON DEMOGRAPHICS



Targeting

Basic Targeting

Connections

Targeting

Demographics



Search the web using Google!

10 results

Index contains ~25 million pages (soon to be much bigger)

[About Google!](#)

[Stanford Search](#) [Linux Search](#)

Get Google! updates monthly!

[Archive](#)

Copyright ©1997-8 Stanford University



An individual hyperscale data center would typically have a footprint of more than **10,000m²**. The latest Amazon facility in Dublin to be approved for construction will grow to eight buildings totaling **165,000m²**, the combined equivalent of about **24 soccer pitches**.

Facebook's Clonee data center - <https://strelkamag.com/en/article/the-sacred-fire-of-a-data-center>



The IT sector is responsible for about **2% of global carbon emissions**. It estimates to drain one-fifth of the world's energy in the next 10 years.
















<https://natick.research.microsoft.com/>

https://www.researchgate.net/publication/320225452_Total_Consumer_Power_Consumption_Forecast

<https://gizmodo.com/amazon-is-aggressively-pursuing-big-oil-as-it-stalls-ou-1833875828>



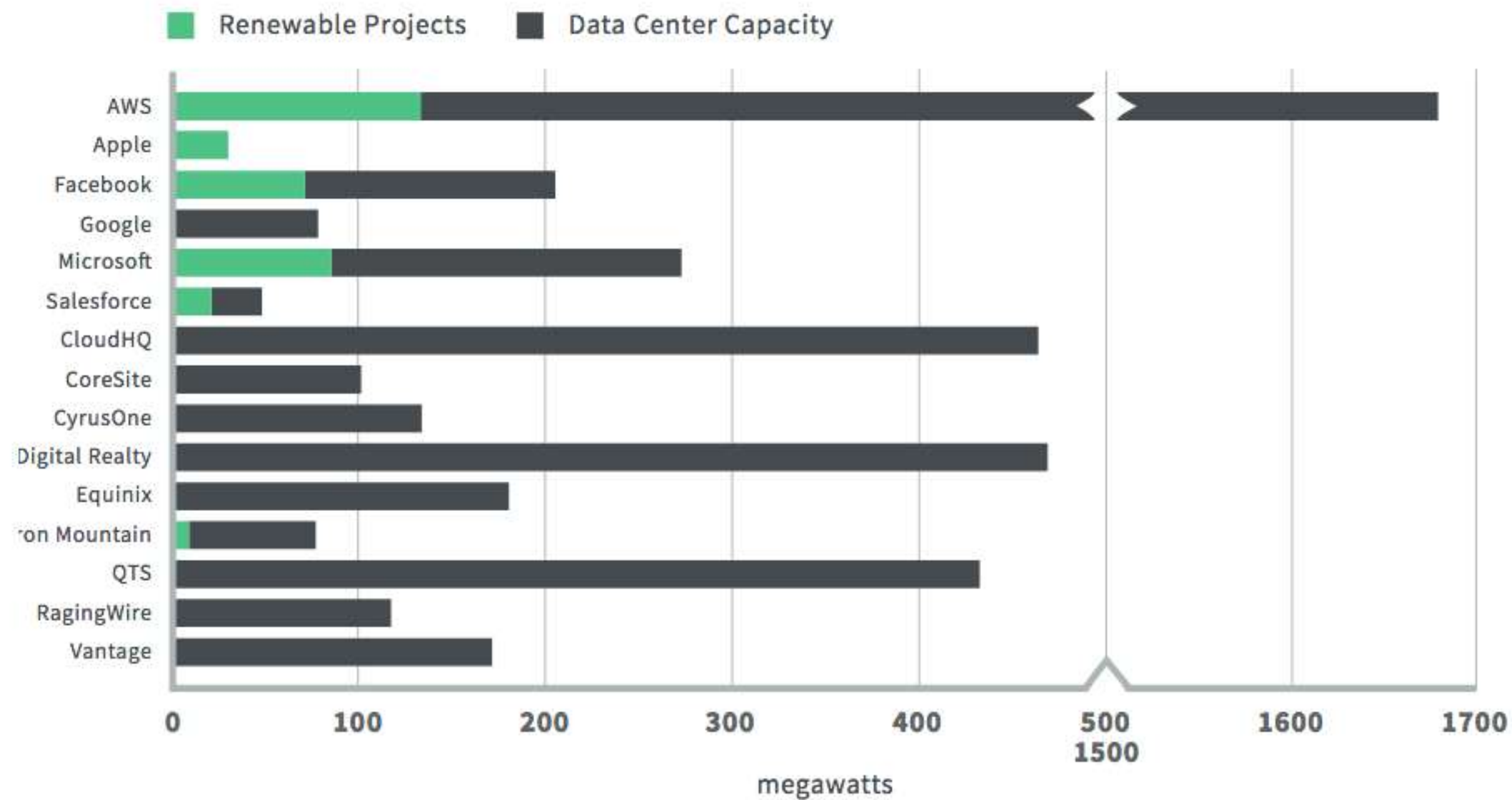
<https://natick.research.microsoft.com/>

	Final Grade	 Clean Energy Index	 Natural Gas	 Coal	 Nuclear	Energy Transparency	Renewable Energy Commitment & Siting Policy	Energy Efficiency & Mitigation	Renewable Procurement	Advocacy
 Adobe	B	23%	37%	23%	11%	B	A	B	B	A
 Alibaba.com	D	24%	3%	67%	3%	F	F	C	F	D
 amazon.com	C	17%	24%	30%	26%	F	D	C	C	B
 Apple	A	83%	4%	5%	5%	A	A	A	A	B
 Baidu	F	24%	3%	67%	3%	F	F	D	F	F
 Facebook	A	67%	7%	15%	9%	A	A	A	A	B
 Google	A	56%	14%	15%	10%	B	A	A	A	A
 HP	C	50%	17%	27%	5%	D	B	C	B	C
 IBM	C	29%	29%	27%	15%	C	B	C	C	F
 Microsoft	B	32%	23%	31%	10%	B	B	C	B	B
 NAVER	C	2%	19%	39%	31%	B	B	B	D	D
 ORACLE	D	8%	26%	36%	25%	D	D	F	D	F
 Salesforce	B	43%	12%	16%	15%	B	A	C	B	B
 Samsung SDS	D	11%	19%	29%	31%	C	D	C	D	C
 Tencent	F	24%	3%	67%	3%	F	F	D	F	F

Amazon controls around **35-40%** of the entire **cloud computing market**

Dirty Data or Clicking Clean— Who is Closing the Dirty Energy Gap in Virginia?

Amazon controls around **35-40%** of the entire **cloud computing market**





UN Climate Change ✓

@UNFCCC

Follow



Congrats [@amazon](#) CEO [@JeffBezos](#) to your company's new [#wind farm](#) [invent.ge/2yUjmR6](#) [#ClimateAction](#) [#COP23](#)



12:13 AM - 20 Oct 2017

35 Retweets 60 Likes



5

35

60

JEVONS PARADOX

“In economics, the Jevons paradox occurs when **technological progress** or government policy **increases the efficiency** with which a **resource** is used (reducing the amount necessary for any one use), but the **rate of consumption** of that resource **rises** due to increasing demand.”

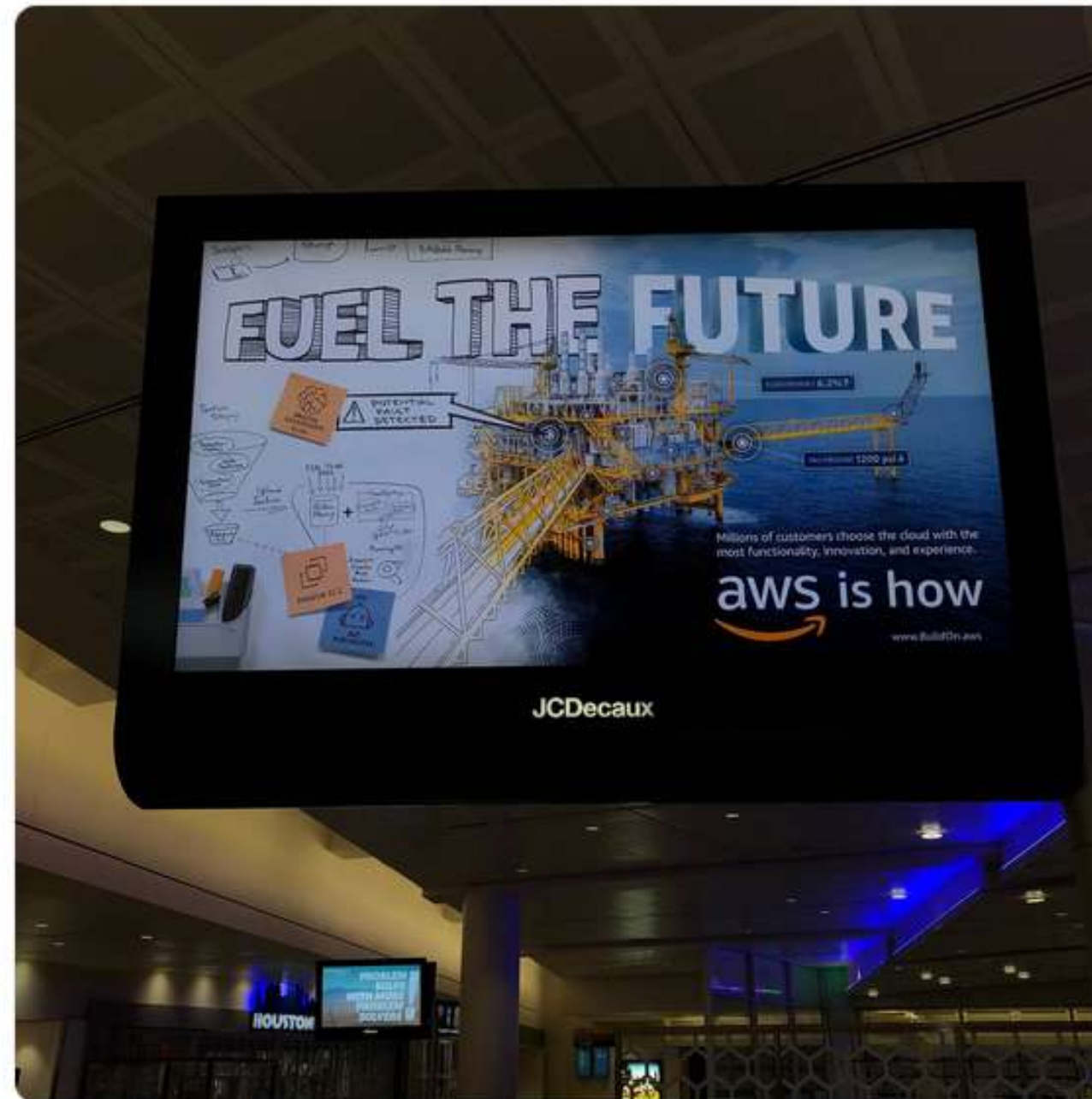


Ed Crooks ✓

@Ed_Crooks

Follow

A sign of the times. Amazon advertising its services for the oil and gas industry at Houston International airport



8:26 PM - 10 Mar 2019

17 Retweets 39 Likes



5

17

39



The digital oilfield of the future

SOLUTIONS FOR THE MODERN OIL & GAS COMPANY

Oil and gas companies of all sizes are partnering with AWS to run business and technical workflows in upstream, midstream, and downstream. Old workflows are running faster, manual tasks are automated, and work is done collaboratively, allowing companies to reduce costs, find more oil faster, and make better decisions.

But AWS is also helping oil and gas companies completely transform the industry. Imagine a future with drone-enabled corrosion detection, eliminating appraisal wells through the use of Machine Learning, AR/VR to enable remote training for production operators, computer vision to improve safety outcomes, and frictionless purchasing at every convenience store and pump.

Benefits

FIND OIL FASTER

Use machine learning and big data to extract deeper insights. Automate manual tasks and improve the speed and accuracy of decision making.

RECOVER MORE OIL

From the oilfield to the gas station, AWS makes it easy to connect more sensors so you have more control over data and equipment to prevent downtime and improve efficiencies.

REDUCE THE COST PER BARREL

The AWS global footprint, with its efficiencies from automation and economies of scale, passes on savings to you, while reducing management overhead.

REDUCE RISK AND ENSURE COMPLIANCE

AWS supports a broad and complete set of security and compliance programs including NIST and ISO, which help protect business-critical data, and meet compliance and data residency requirements.

“**Amazon Web Services** is providing services to every stripe of fossil fuel company: **Mitsui Coal Holdings**, a Japanese coal investment company, is a customer. So is **Gulfmark Offshore**, which manages a fleet of 70 oil rig support vessels, and **SEAOil**, the Philippines’ largest independent oil company. Also **Pacific Inter-Link Group**, a palm oil company responsible for some of the world’s most severe deforestation in Southeast Asia”

20%

20%+ reduction in workover frequency*

*Leading Unconventional Gas Operator – C3IoT Case Study

2x

Improved reservoir potential*

*TNO P11 – Olympus Challenge – Coventry university

\$52M

\$52M+ in annual economic value with predictive maintenance.*

*C3IoT Case Study: Large Independent Oil Produce Leverages Advanced Analytics Platform to Predict Failure of Oilfield Equipment



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Fueling the oil and gas industry with IoT

May 23, 2019

[Print](#)

Rockwell Automation

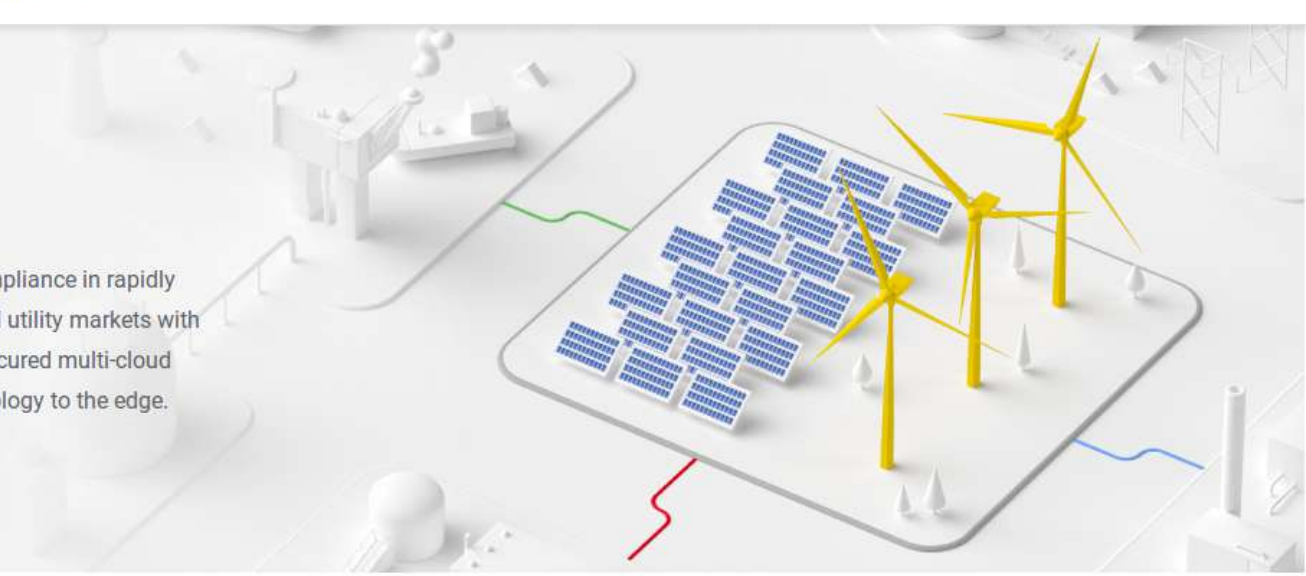
Rockwell Automation created a solution to monitor expensive capital assets and use that data to improve efficiency, drive better performance and enable innovation. Based on Microsoft Azure Internet of Things services, the solution collects, integrates, and organizes sensor data from remote equipment across global supply chains to support real-time insight, predictive analytics, and preventive maintenance.



Microsoft clients include major fossil fuel companies such as **Exxon Mobile, Chevron, BP, Total, Eni** and **Shell**.

Energy

Get more competitive and ensure compliance in rapidly changing upstream, downstream, and utility markets with our powerful technology, including secured multi-cloud and hybrid solutions that drive technology to the edge.



Infrastructure modernization

Power your exploration and production with high performance computing

As their computing demands grow, oil and gas companies like Schlumberger rely on Google Cloud to scale workloads, such as seismic interpretation, regression analysis and classification, and fast basin modeling and simulation. With Google Cloud Platform, these workloads scale up in minutes, including clusters with several hundred (or thousand) cores and are billed based on the compute seconds used.

In scaling its hallmark electricity and gas payment solution, [Podo](#) replatformed on Google Cloud's scalable, reliable infrastructure, withstanding high traffic spikes for a fraction of the cost compared to physical machines. By deploying virtual instances with Compute Engine, Podo has the flexibility to meet changing demands by adding and subtracting virtual machines at will — while using Stackdriver for

Google open an Energy division in 2018 and is actively working with **Chevron**.



Reliable, Affordable Energy for the World

Investing in a Carbonless Future

MY CLIMATE PLEDGE

MYTHCONCEPTIONS

PARTNERS

TAKE THE PLEDGE

In many ways, our natural environment is getting better.

Our water is cleaner – both nationally and worldwide. Our air is cleaner. The ozone hole is closing. The number of trees in the United States and across the earth is growing. Our CO₂ emissions have decreased by about 14% below 2005 levels, and in the United States, nitrous oxide and methane emissions are down to where they were 30 years ago.

That's all very good news! But many people are still concerned about the pressures humans place on our environment, and the Peoples Climate Movement arose out of these concerns. On Sept. 20 to 27, it is asking people around the planet to walk out of school and the workplace to demand change.

But this sort of escalation and deliberately disruptive action will likely be counterproductive. While direct action may help strikers to feel better by giving them a venue to express their frustrations and fears, it will also drive a lot of people away from their concerns. Additionally, it places the hope for solutions in politicians instead of directly confronting the problem ourselves.

Top 100 producers and their cumulative greenhouse gas emissions from 1988-2015

Count	Company	Percentage of global industrial greenhouse gas emissions
1	China (Coal)	14.32%
2	Saudi Arabian Oil Company (Aramco)	4.50%
3	Gazprom OAO	3.91%
4	National Iranian Oil Co	2.28%
5	ExxonMobil Corp	1.98%
6	Coal India	1.87%
7	Petroleos Mexicanos (Pemex)	1.87%
8	Russia (Coal)	1.86%
9	Royal Dutch Shell PLC	1.67%
10	China National Petroleum Corp (CNPC)	1.56%
11	BP PLC	1.53%
12	Chevron Corp	1.31%
13	Petroleos de Venezuela SA (PDVSA)	1.23%
14	Abu Dhabi National Oil Co	1.20%
15	Poland Coal	1.16%
16	Peabody Energy Corp	1.15%
17	Sonatrach SPA	1.00%
18	Kuwait Petroleum Corp	1.00%
19	Total SA	0.95%
20	BHP Billiton Ltd	0.91%

