FGV DIREITO RIO

CENTRO DE TECNOLOGIA
E SOCIEDADE

PABLO**CERDEIRA**
Chief Data Officer - Rio de Janeiro City Hall
Head Center of Technology and Society

Os desafios da profissionalização na era das redes e das novas tecnologias

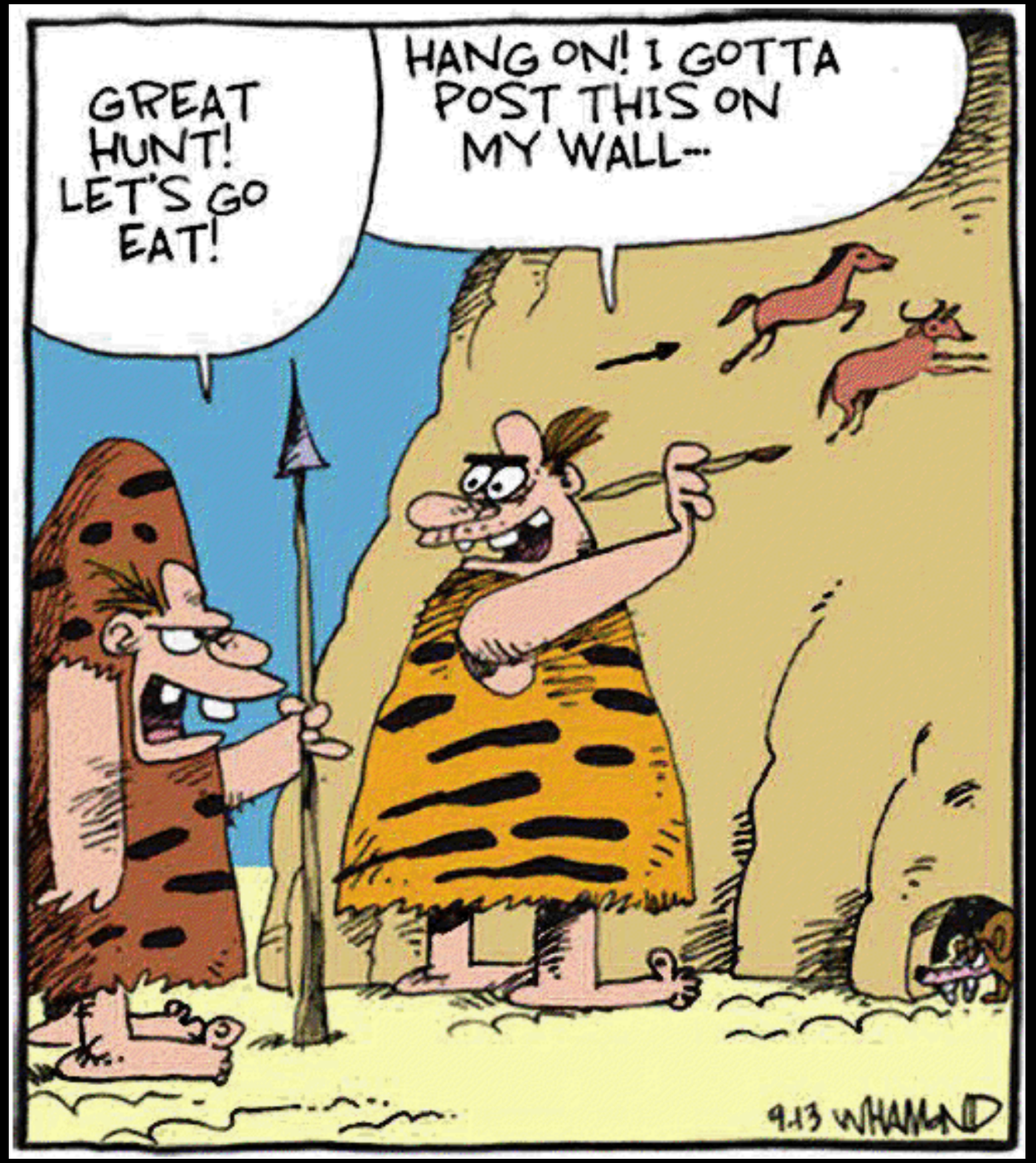
Every 14 minutes, somewhere in the world, an ad exec strides on stage with the same breathless declaration:

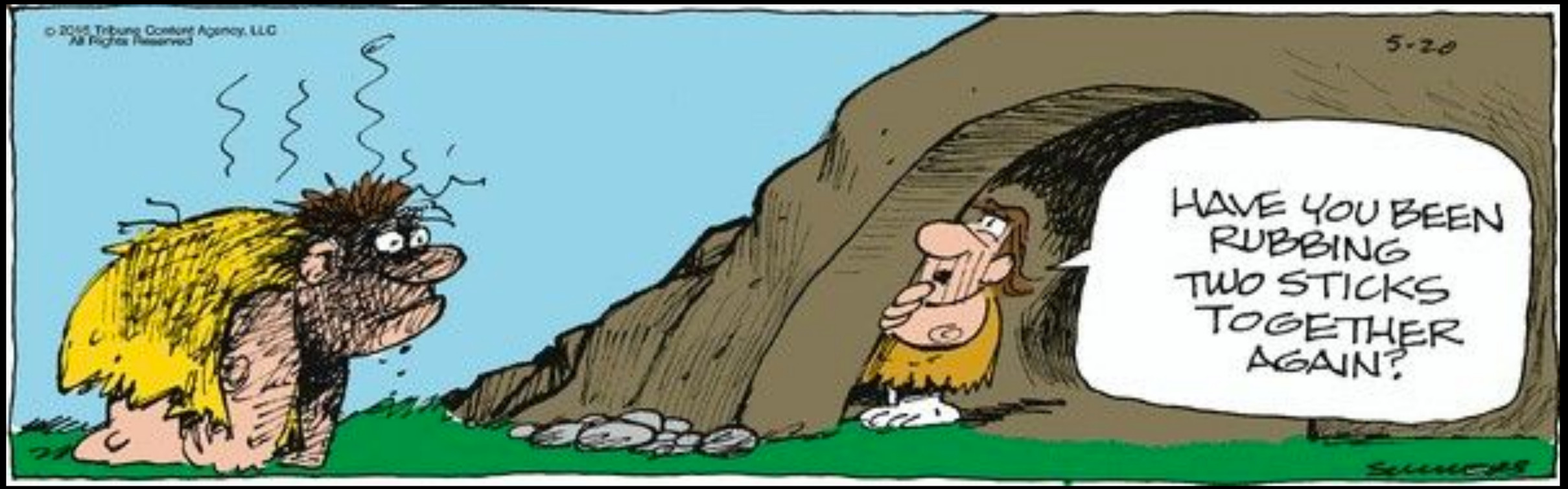
“Data is the new oil!”

Big Data Is Not the New Oil
Jer Thorp
Harvard Business Review

OIL	DATA
it takes effort to be obtained	it takes effort to be obtained
many different uses	many different uses
consumable	**asset/accumulate**
natural resource	**human resource**
products	**knowledge about society**
-	**build bottom-up solutions**

THE FLYING McCOYS
BY GARY & GLENN McCOY
HUNTERS
GATHERERS
GLENN


GREAT HUNT! LET'S GO EAT!
HANG ON! I GOTTA POST THIS ON MY WALL--
9.13 WHAMLND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5-20
HAVE YOU BEEN RUBBING TWO STICKS TOGETHER AGAIN?

"I thought I was on to something but I can't figure out how to move it."

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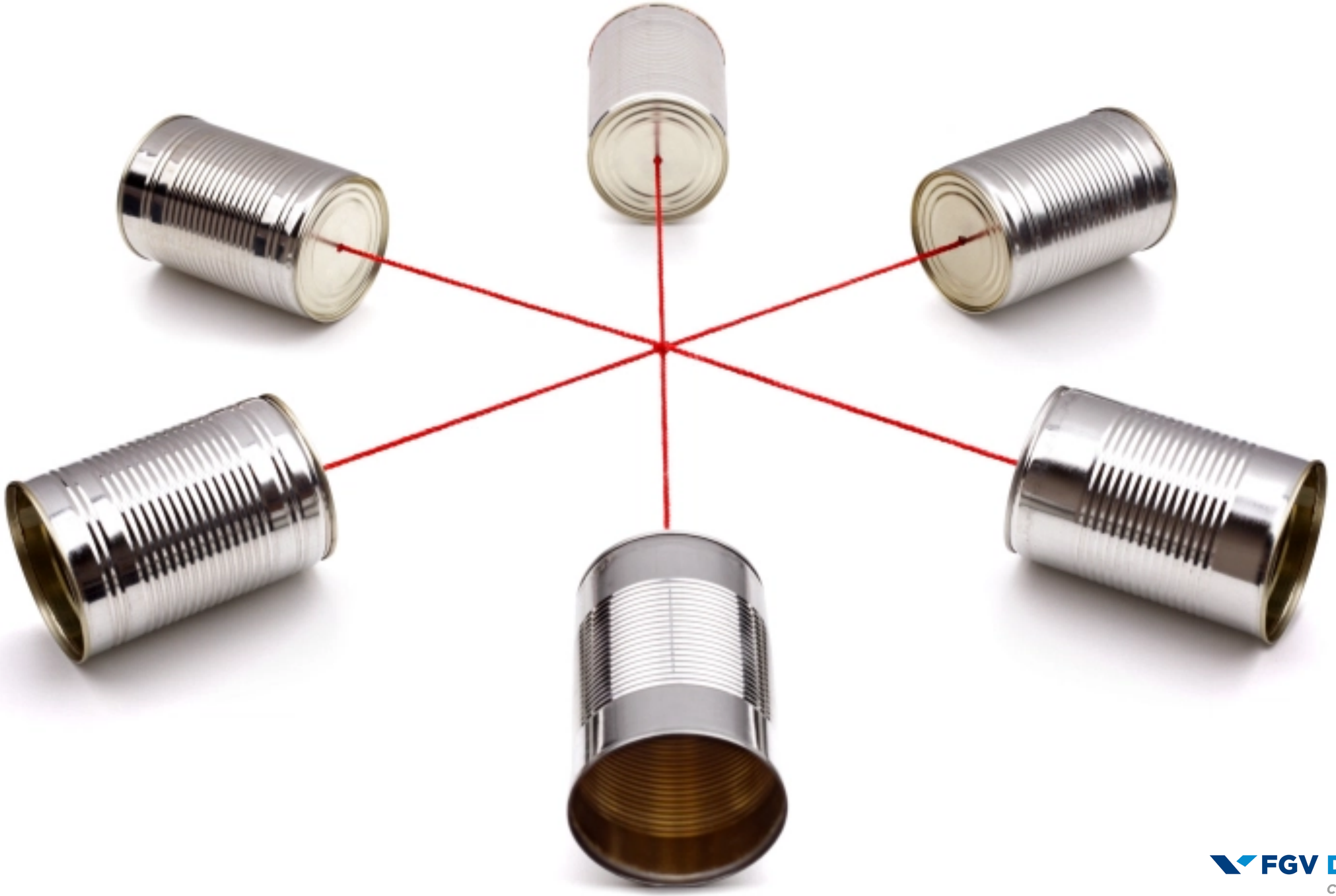
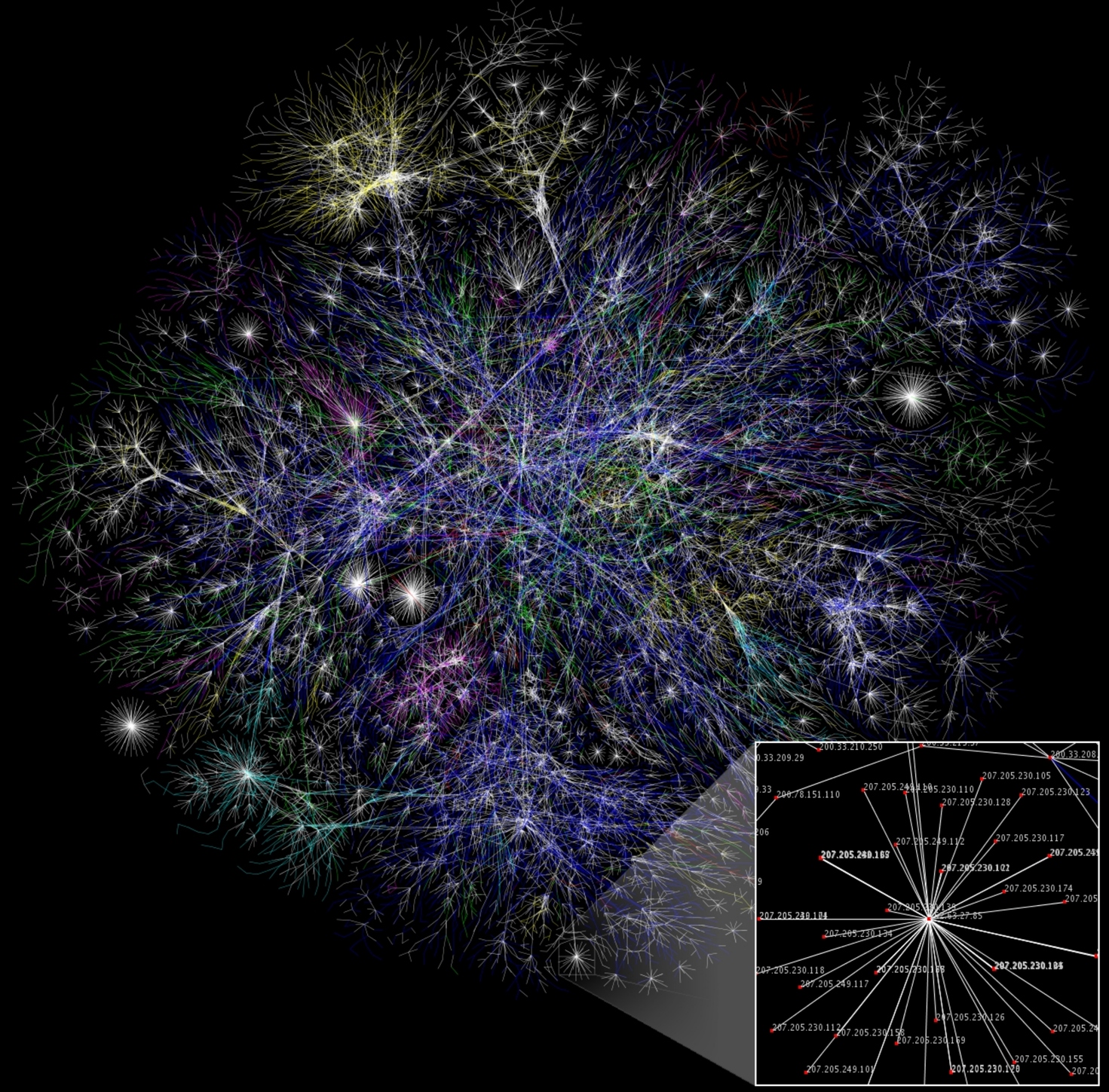
INTERNET

~~INTERNET~~

CONEXÃO
DADOS
INTELIGÊNCIA**ARTIFICIAL**





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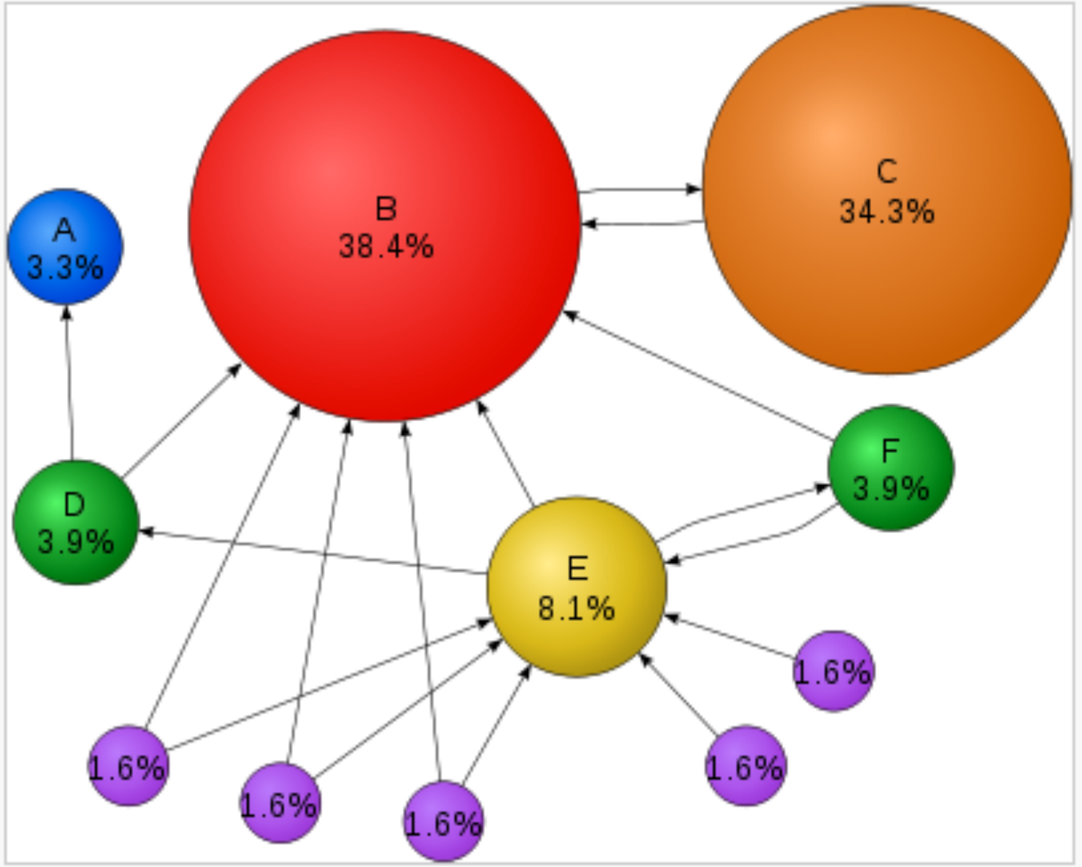
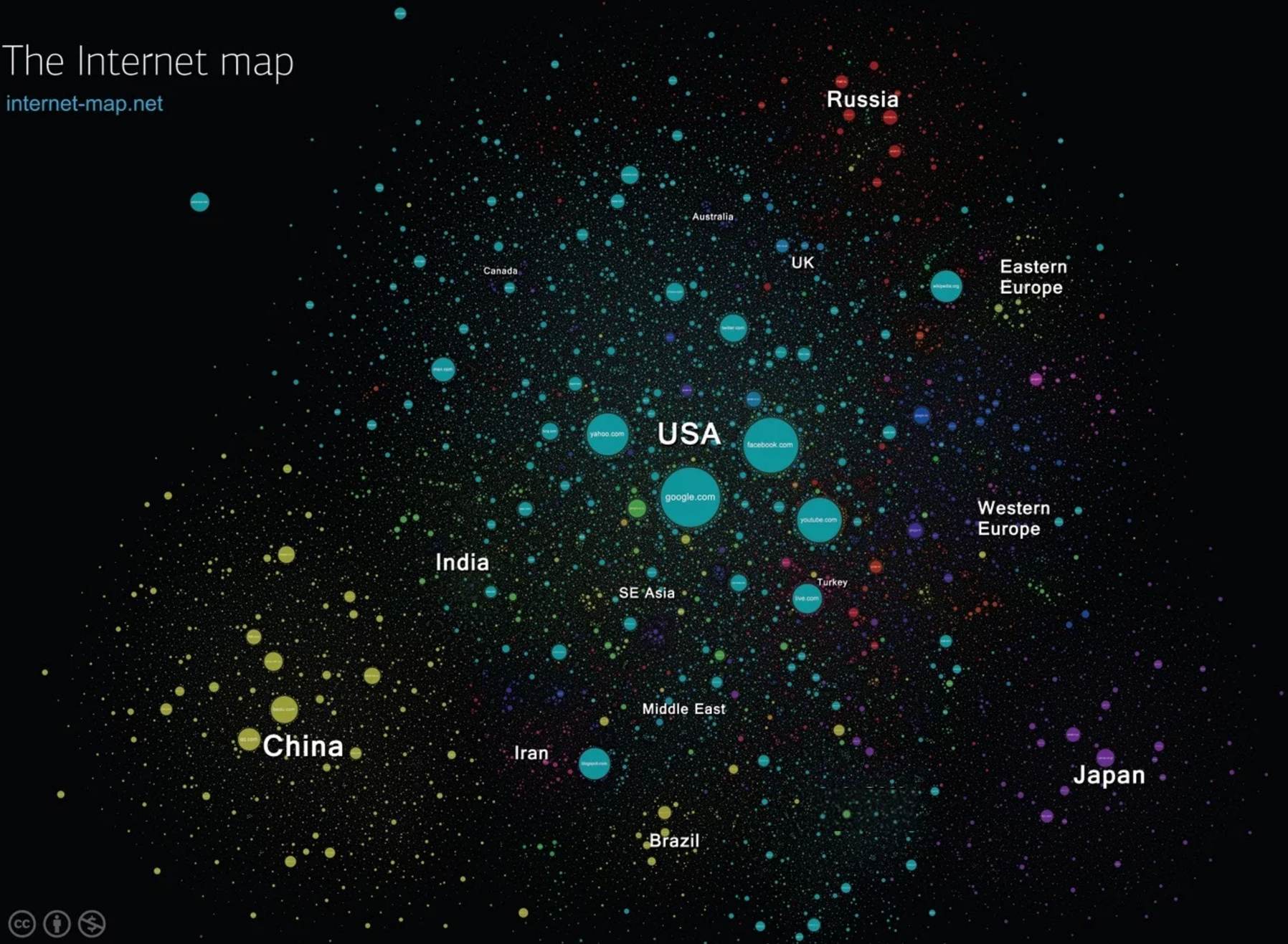


Mathematical **PageRanks** for a simple network, expressed as percentages. (Google uses a logarithmic scale.) Page C has a higher PageRank than Page E, even though there are fewer links to C; the one link to C comes from an important page and hence is of high value. If web surfers who start on a random page have an 85% likelihood of choosing a random link from the page they are currently visiting, and a 15% likelihood of jumping to a page chosen at random from the entire web, they will reach Page E 8.1% of the time. (The 15% likelihood of jumping to an arbitrary page corresponds to a damping factor of 85%.) Without damping, all web surfers would eventually end up on Pages A, B, or C, and all other pages would have PageRank zero. In the presence of damping, Page A effectively links to all pages in the web, even though it has no outgoing links of its own.

The Internet map

internet-map.net



CC BY NC

MENU

nature COMMUNICATIONS

Altmetric: 143 Views: 7,895 Citations: 1 More detail »

Article | OPEN

Understanding congested travel in urban areas

Serdar Çolak, Antonio Lima & Marta C. González

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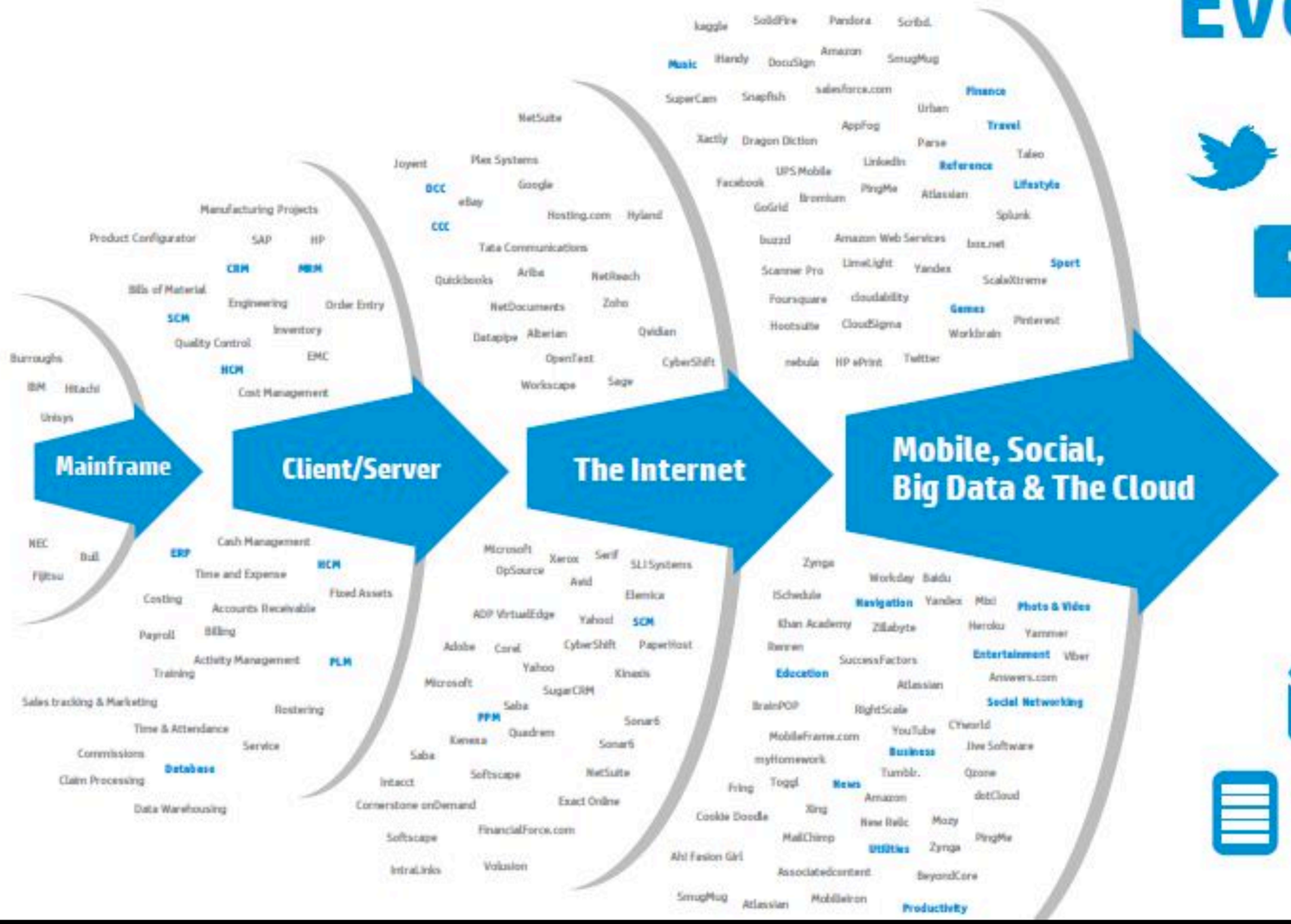
15–30 percent of total minutes lost in congestion is caused solely by selfish routing

Understanding congested travel in urban areas

"For instance, smartphone apps could offer points and vouchers to drivers who are willing to take longer routes that avoid congested areas. Navigation app Waze has already changed drivers' habits in some cities, so it's not so far-fetched to imagine a gamification system that reduces congestion."

A new style of IT emerging



Every 60 seconds

- **98,000+** tweets
- **695,000** status updates
- **11million** instant messages
- **698,445** Google searches
- **168 million+** emails sent
- **1,820TB** of data created
- **217** new mobile web users

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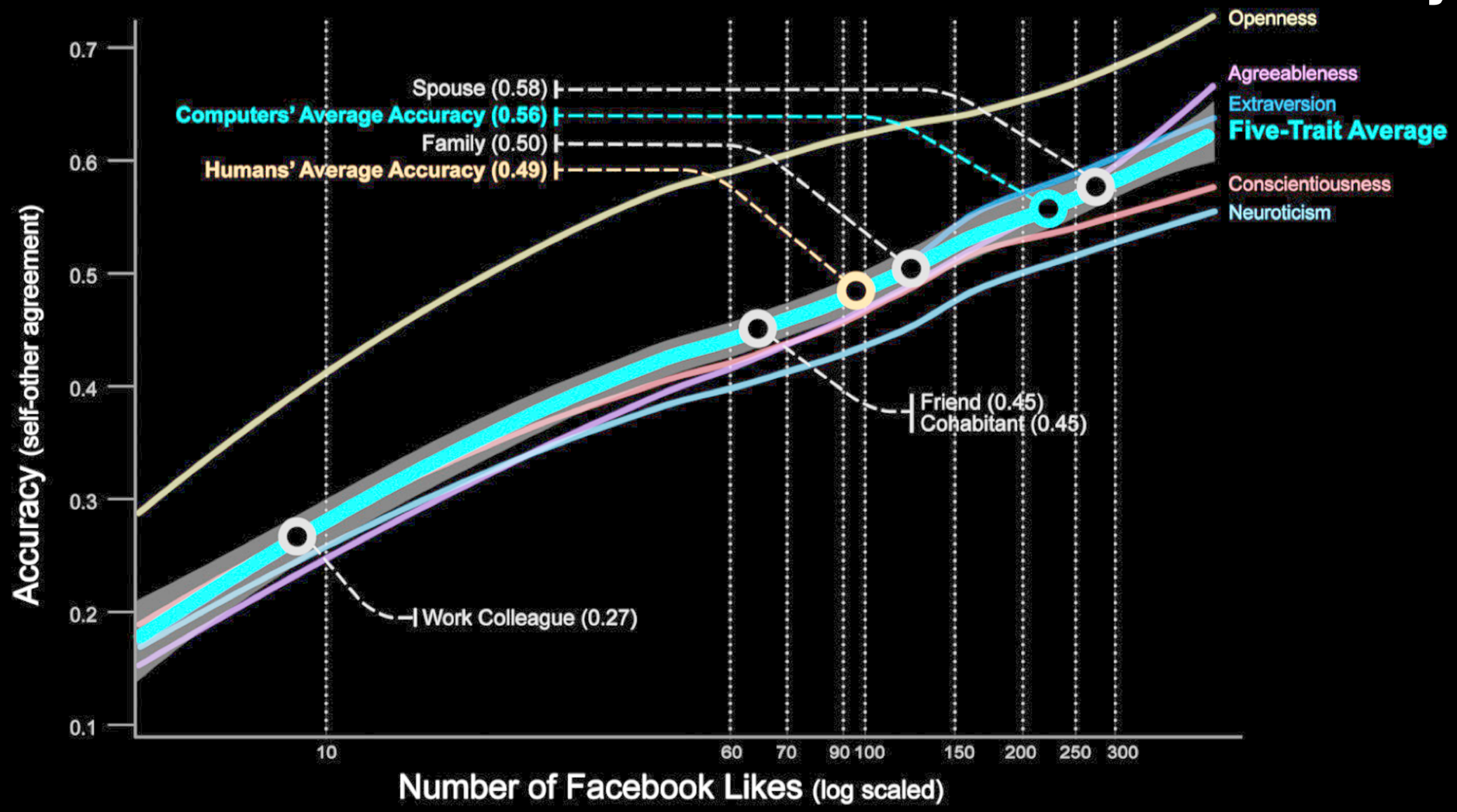
Computer-based personality judgments are more accurate than those made by humans



Wu Youyoua, Michal Kosinskib, and David Stillwella
http://www.pnas.org/content/112/4/1036.abstract

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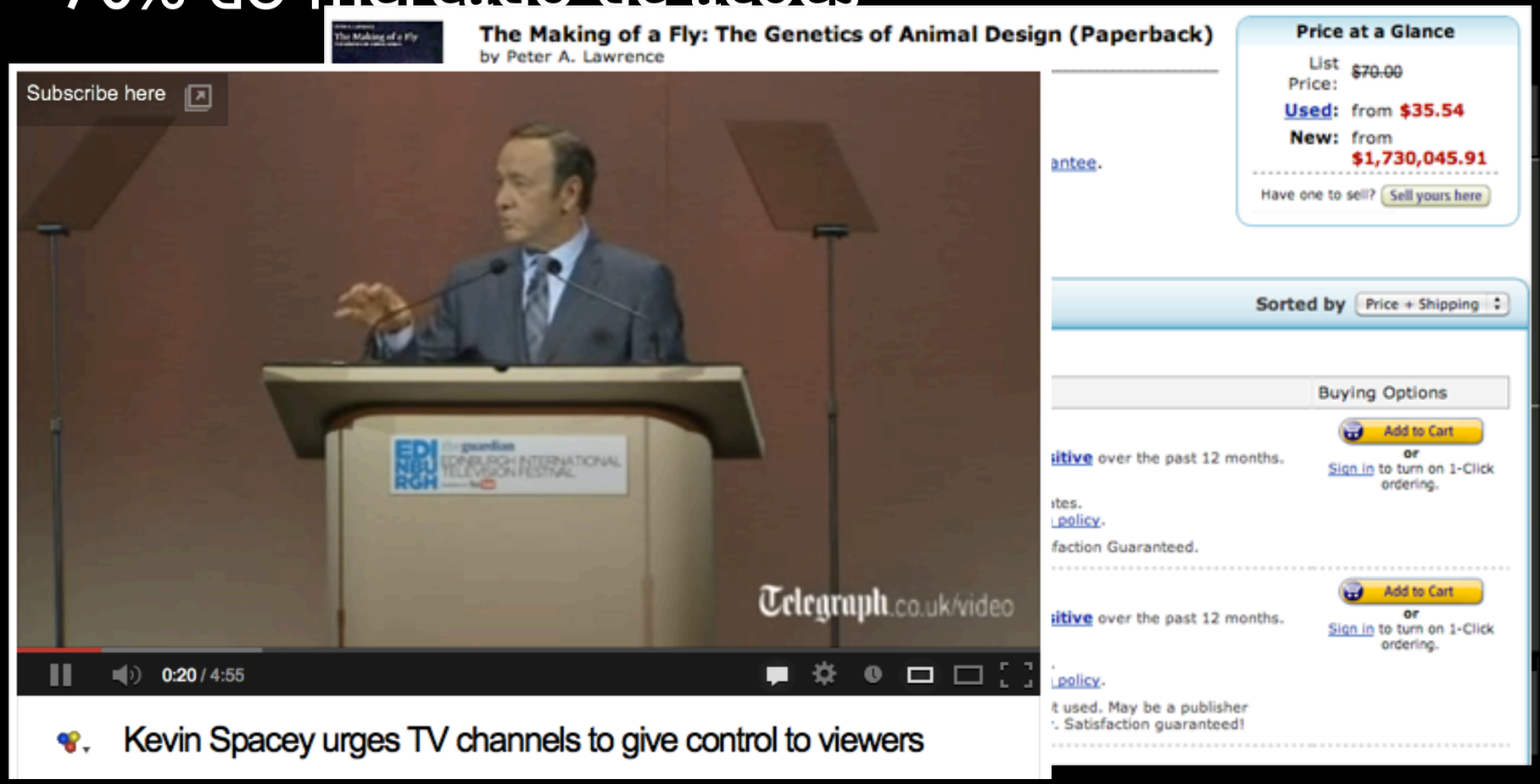
Black Box: identificação de pad

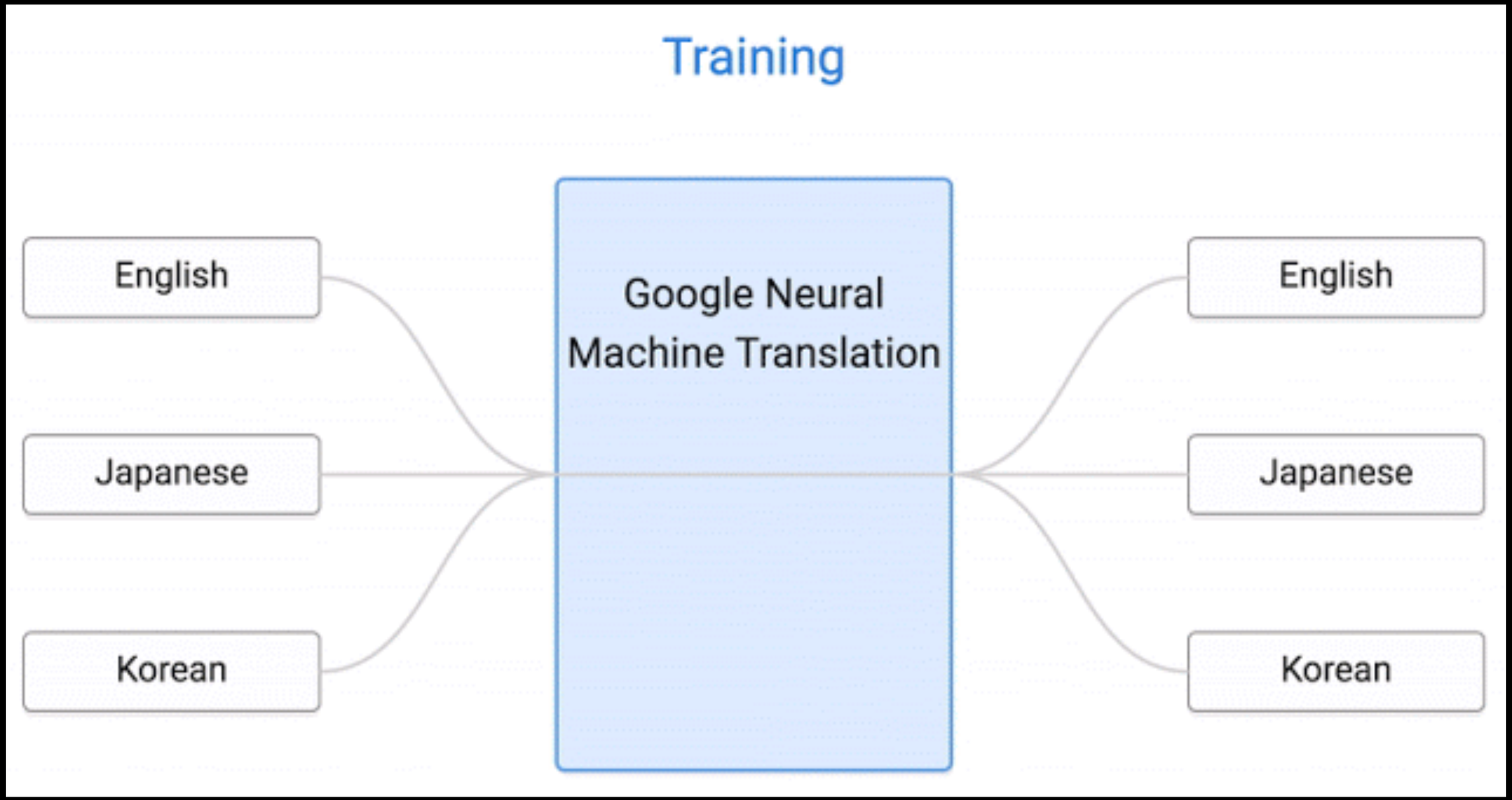
2.000 físicos trabalhando na bo

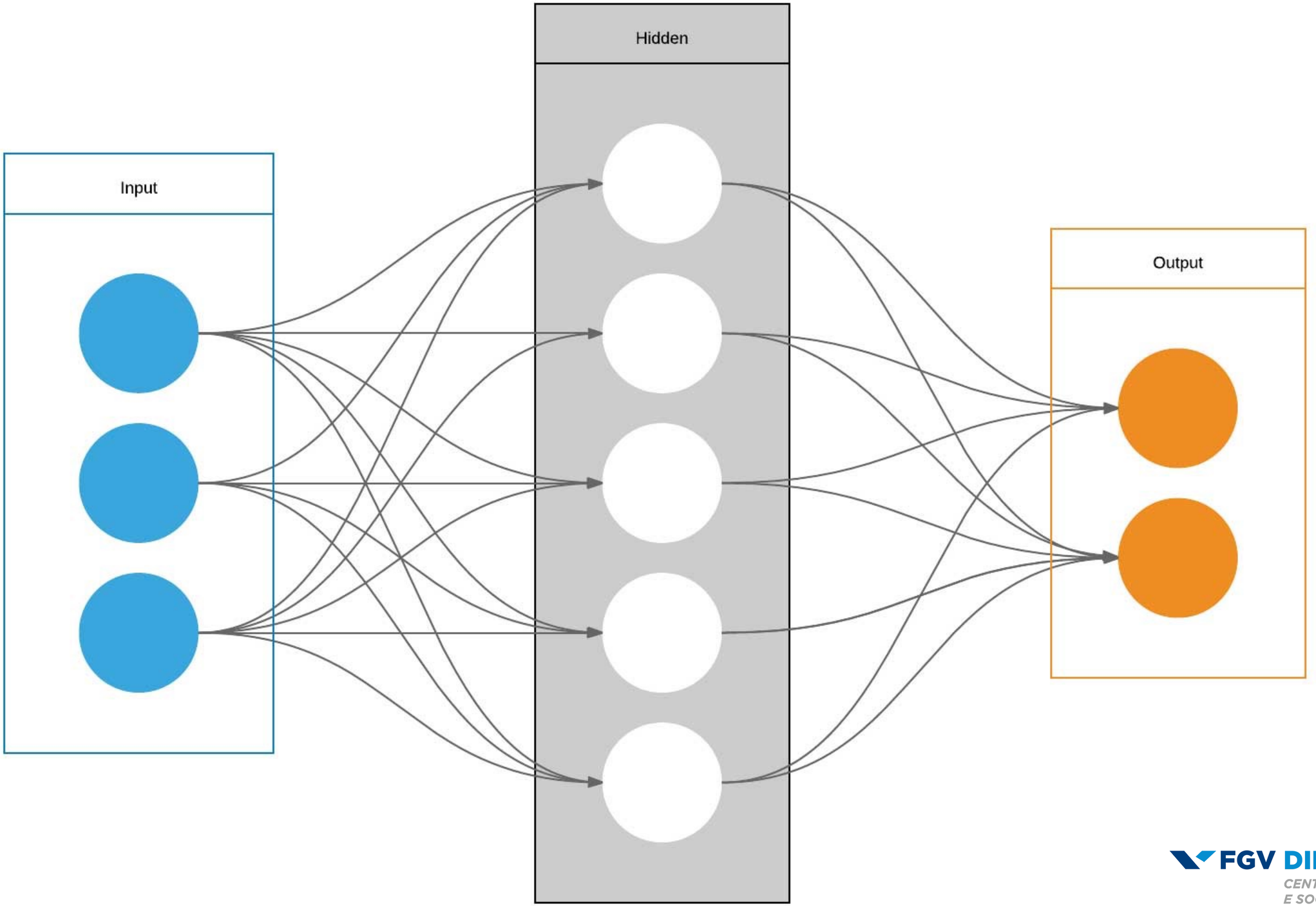
70% do mercado de ações

NETFLIX

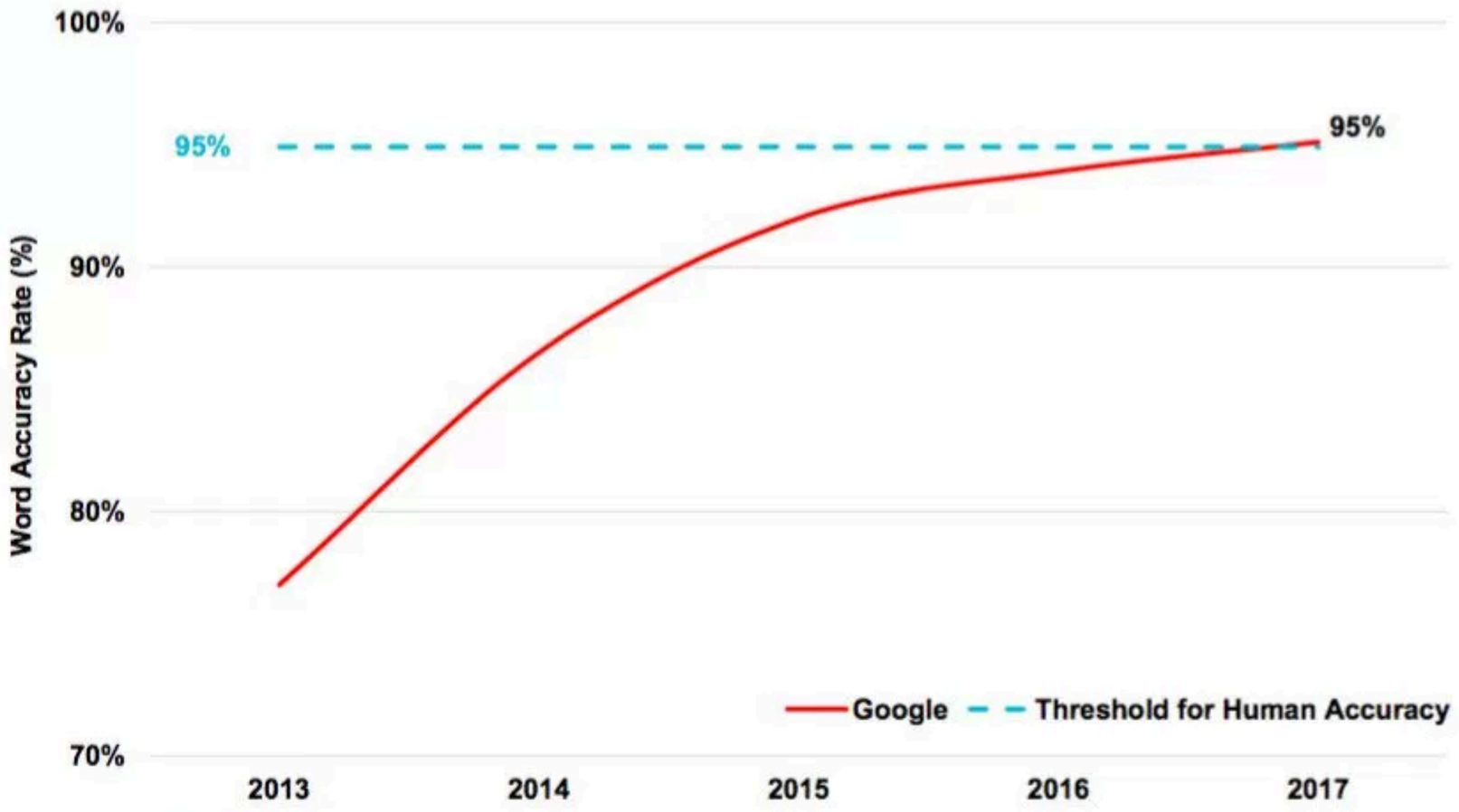


Não quero viver em um mundo no qual
o conhecimento cultural foi substituído


Training
English
Japanese
Korean
Google Neural Machine Translation
English
Japanese
Korean


Input
Hidden
Output

…Voice-Based Platform *Back-Ends* = Voice Recognition Accuracy Continues to Improve



KLEINER PERKINS

Source: Google (5/17)
Note: Data as of 5/17/17 and refers to recognition accuracy for English language. Word error rate is evaluated using real world search data which is extremely diverse and more error prone than typical human dialogue.

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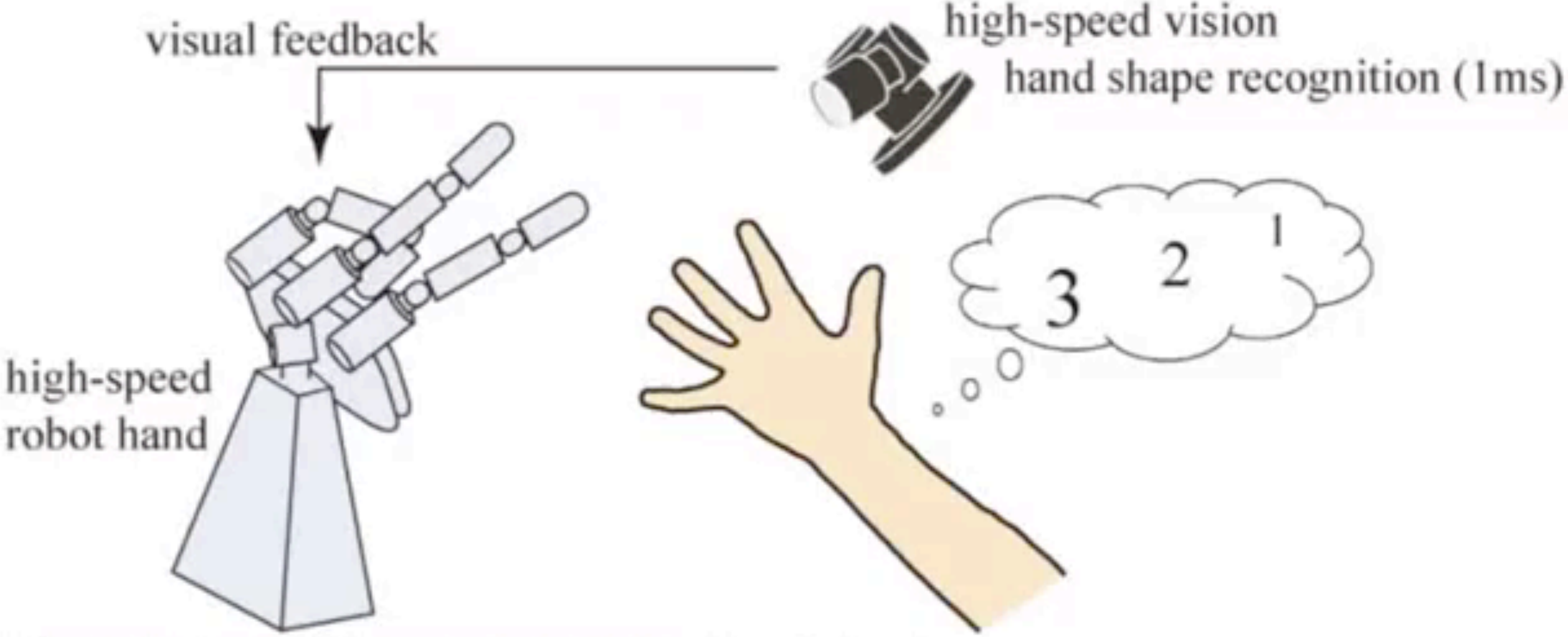
Janken (rock-paper-scissors) Robot with 100% winning rate



After the high-speed vision recognizes shape of human hand,
put the robot hand out to beat them within 1 ms.

Ishikawa Oku Laboratory
The University of Tokyo

UK
2015

TRUMP
2016

DÓRIA
2016

BREXIT
2016

OCCUPY WALL ST

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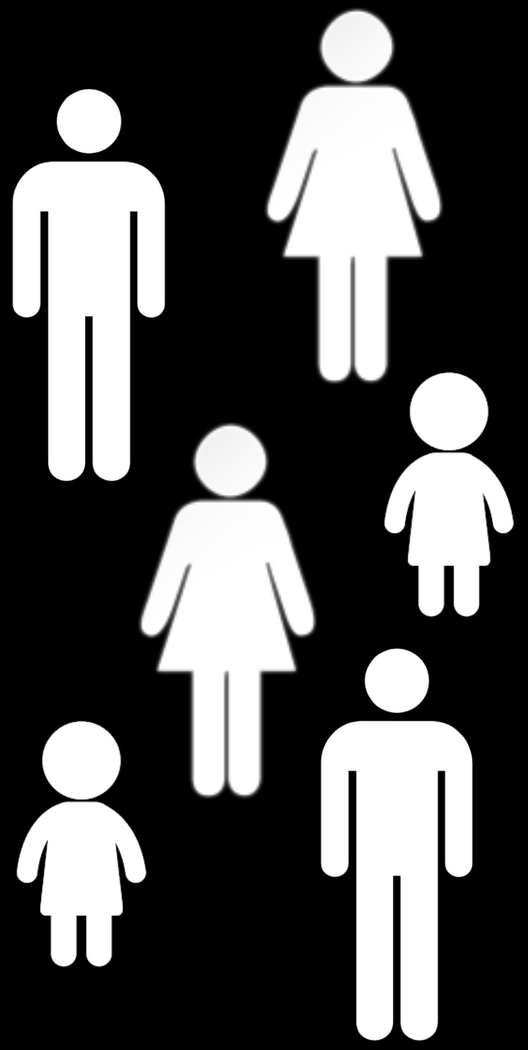
HISTORY of the WORLD
2014
HISTORY of the WORLD
2015
HISTORY of the WORLD
WE DON'T TALK ABOUT THIS ONE
HISTORY of the WORLD
2017
HISTORY of the WORLD
2018

SOCIETY

INSTITUTIONS



1st Gen: Government -> Citizens

Informational websites

2nd Gen: Citizens -> Government

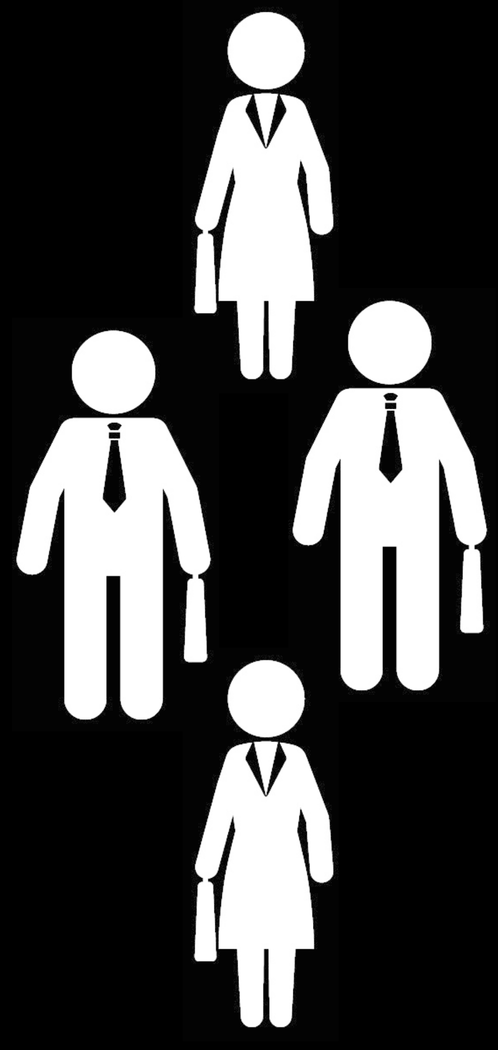
Restricted interactions (1746, 311)

3rd Gen: Citizens -> Government

Open interactions / Collaborative Mapping etc

4th Gen: Citizens <-> Government

Real time reaction / Control Emergency Centers



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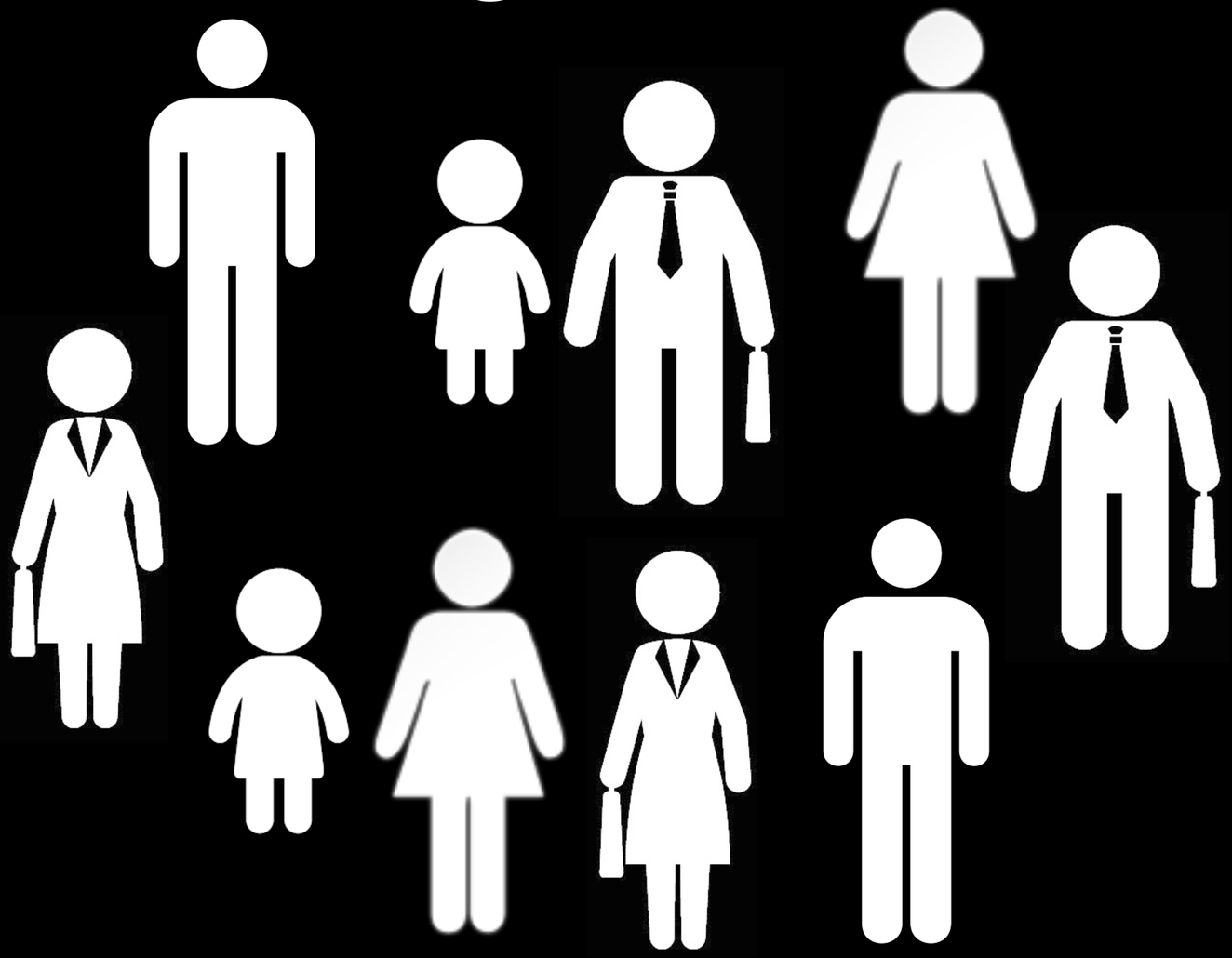
5th Generation:
Ubiquitous Digital Democracy (?)

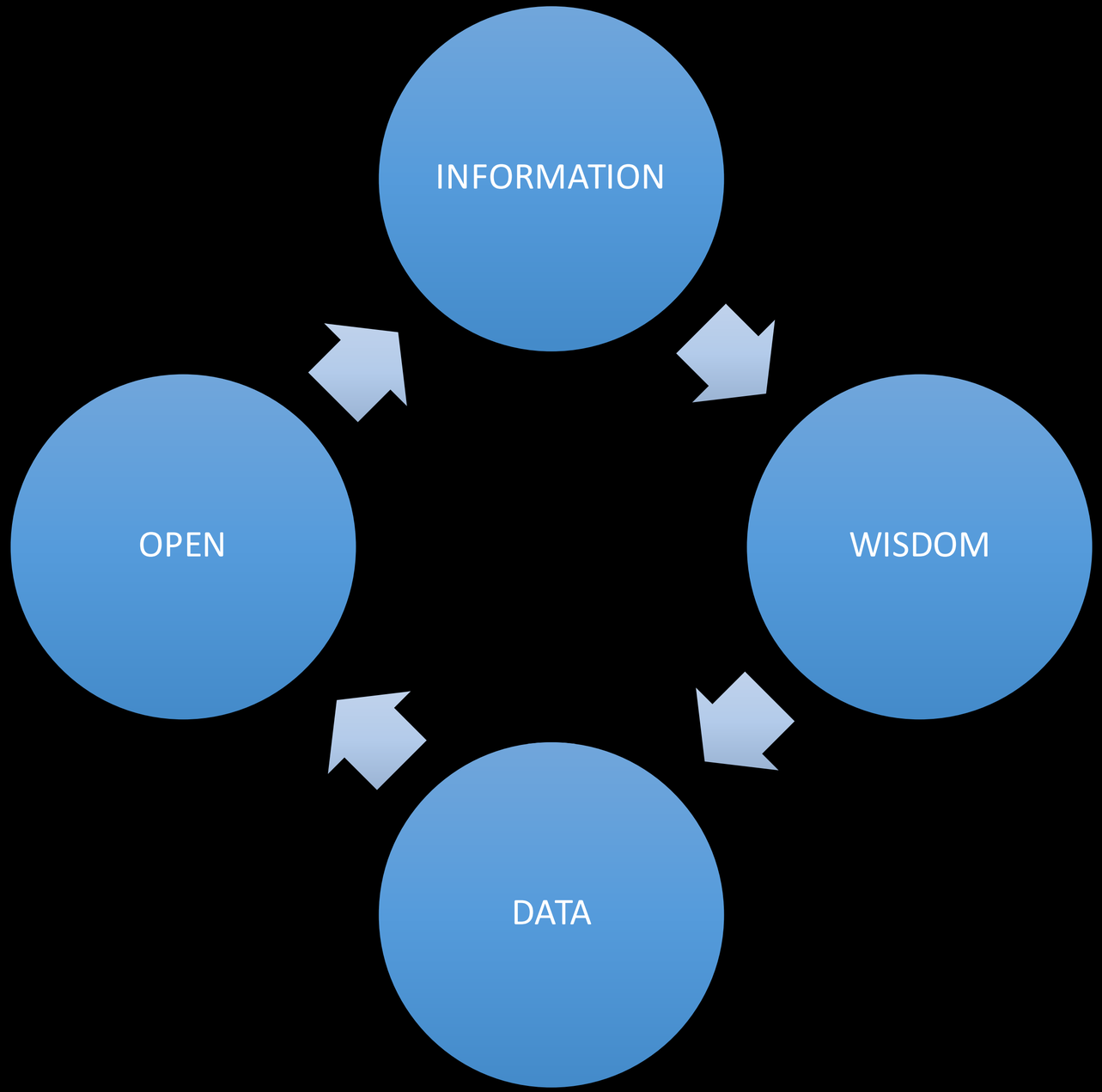


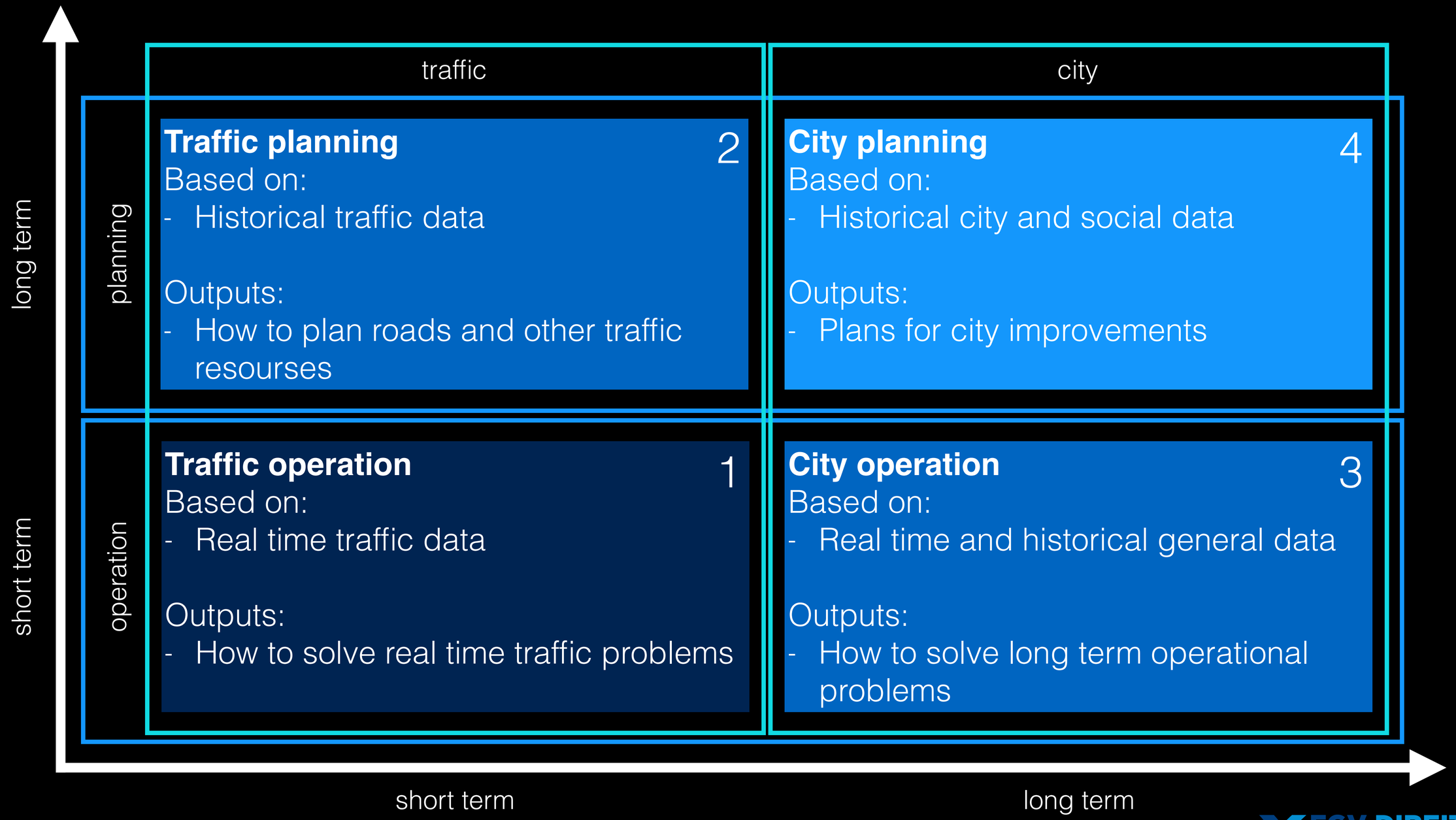
60% dos jovens

9% do
tempo dos cidadãos

15% de nosso PIB

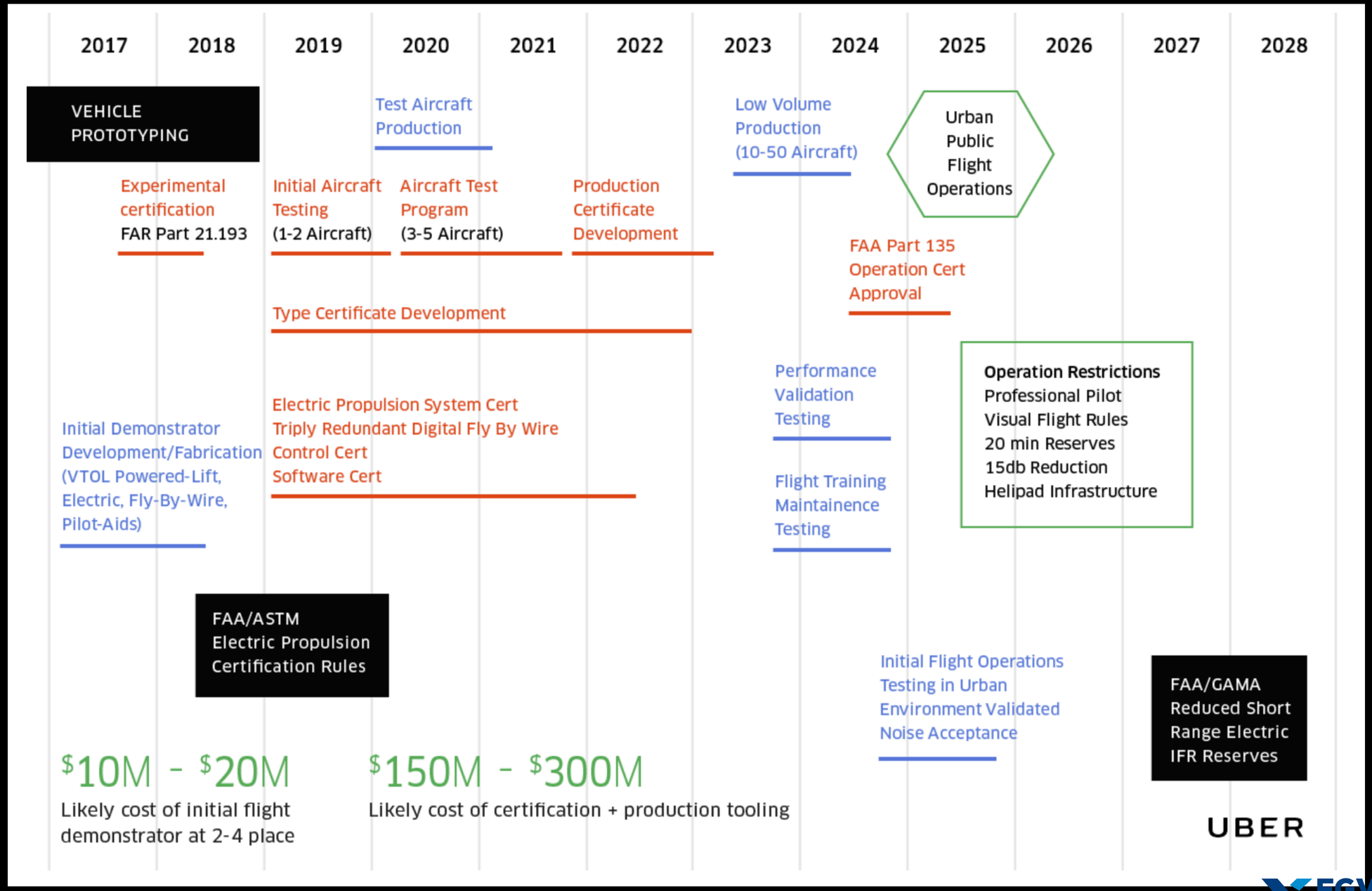
DIKWPYRAMID


INFORMATION
WISDOM
DATA
OPEN


traffic
city
planning
operation
long term
short term
Traffic planning
2
Based on:
- Historical traffic data
Outputs:
- How to plan roads and other traffic resourses
City planning
4
Based on:
- Historical city and social data
Outputs:
- Plans for city improvements
Traffic operation
1
Based on:
- Real time traffic data
Outputs:
- How to solve real time traffic problems
City operation
3
Based on:
- Real time and historical general data
Outputs:
- How to solve long term operational problems
short term
long term

PAR
UBER

Marina
San Francisco
Downtown
San Jose
ESTIMATED PRICING
VTOL
Initial $129
Near-term $43
Long-term $20
Today
uberX $111
uberPOOL $83
uberX + Transit $31
Caltrain
TIME 2hr 12min
DIST 55.4mi
VTOL
TIME 15min
DIST 43.3mi
uberX
TIME 1hr 40min
DIST 56.9mi
UBER



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THE**POWER**OF**DATA**:
DATABASED
CONSTITUTIONAMENDMENT

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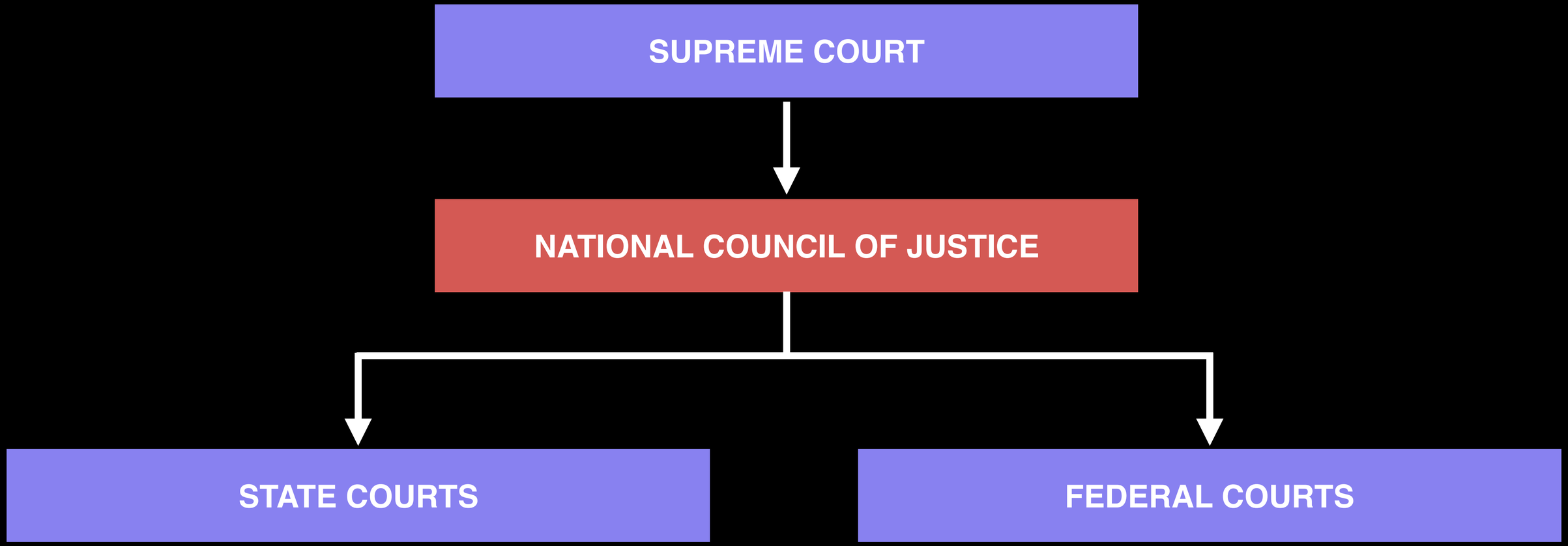

JUSTICE IN NUMBERS
ANNUAL REPORT

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Justices Discuss in Supreme Session

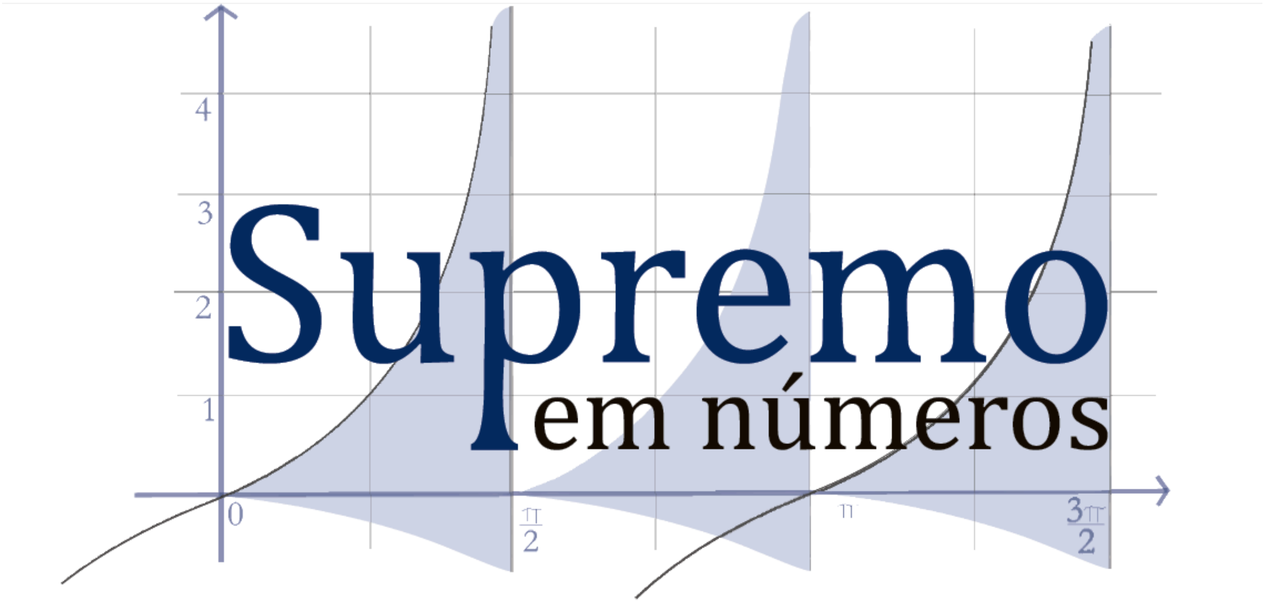
Estado de São Paulo - 09/09/2009

"***I do not accept that the Supreme is placed on the CNJ's (National Council of Justice) website such as it were be submitted to that institution***. *And the Supreme is not. The court is supreme. We do not report to the CNJ*" said Marco Aurélio.

Marco Aurélio says the CNJ bypasses the Constitution

CONJUR - 09/09/2009

"*I do not accept that the **data of** Supreme is placed on the CNJ's (National Council of Justice) website such as it were be submitted to that institution. And the Supreme is not. The court is supreme. We do not report to the CNJ*" said Marco Aurélio.



Supremo em números

FUNDAÇÃO GETULIO VARGAS
DIREITO RIO

Apoio:
FGV
EMAp

http://www.fgv.br/supremoemnumeros

1,222,102 legal cases since 1988

13,789,366 procedural acts

13,789,366 procedural acts since 1988

656,636 per year

2,526 per day

316 per hour

5.26 per minute

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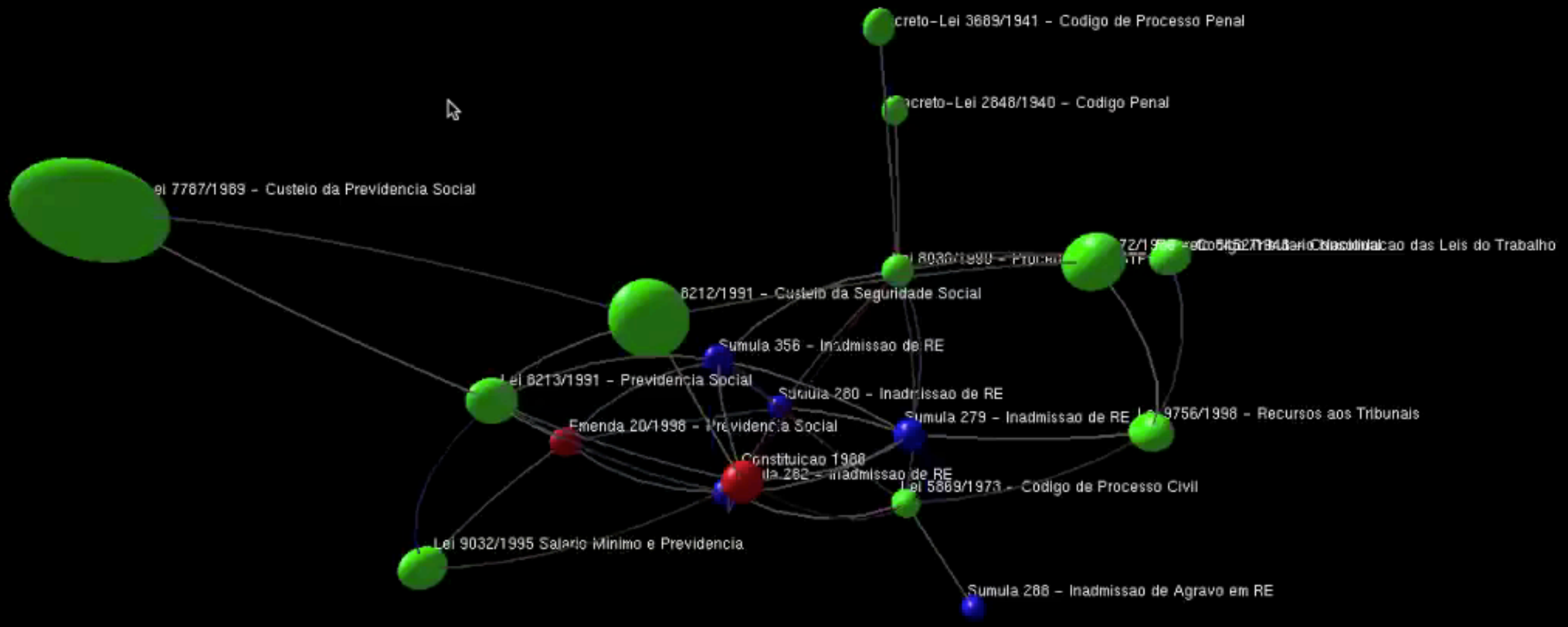
THE FABRIC OF THE BRAZILIAN LEGAL SYSTEM



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COMO **GOVERNAR** EM **UMA** SOCIEDADE **LÍQUIDA?**

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