

# Big Data Analytics na Tomada de Decisão

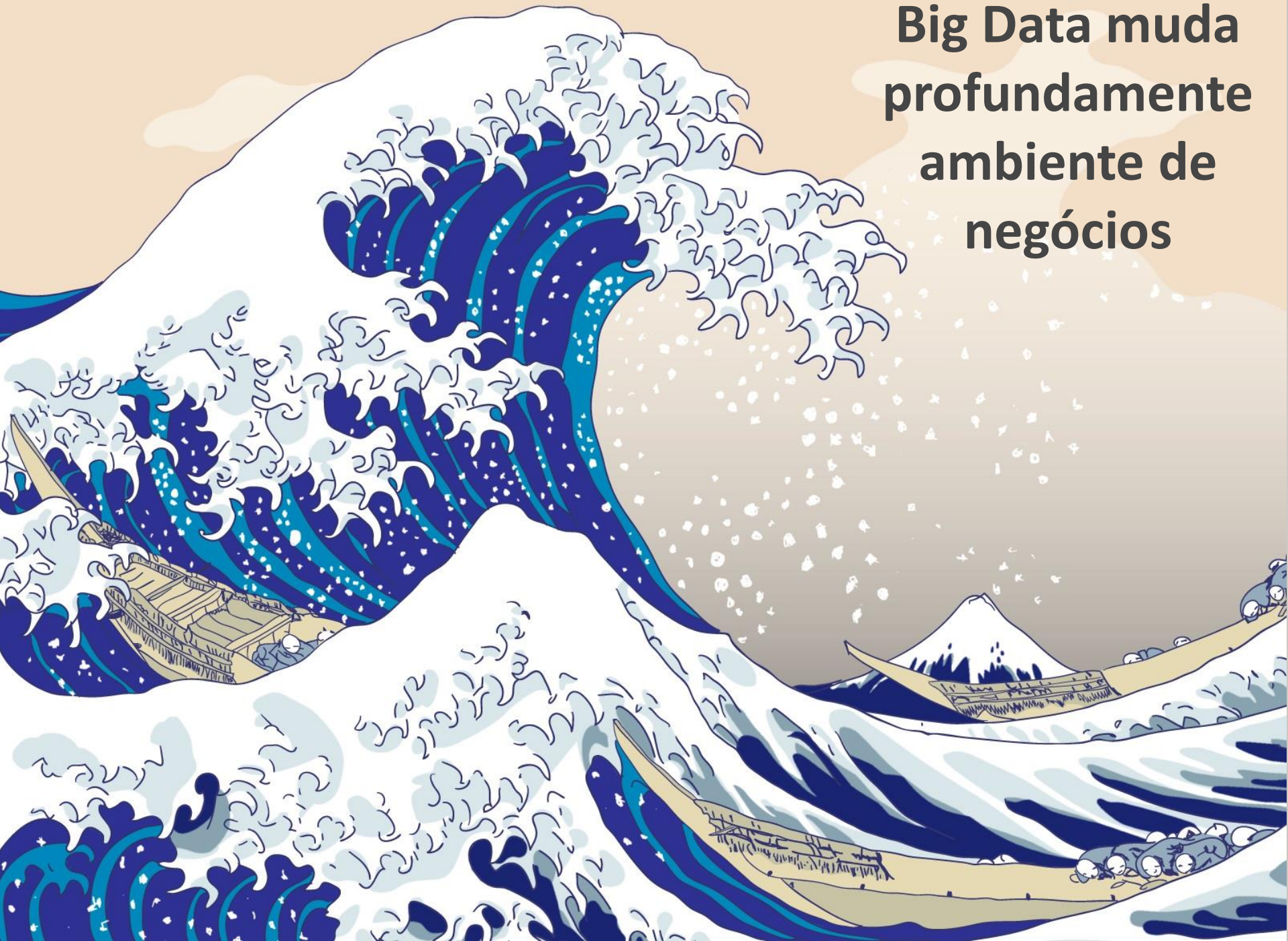
Profº Dr Claudio Oliveira



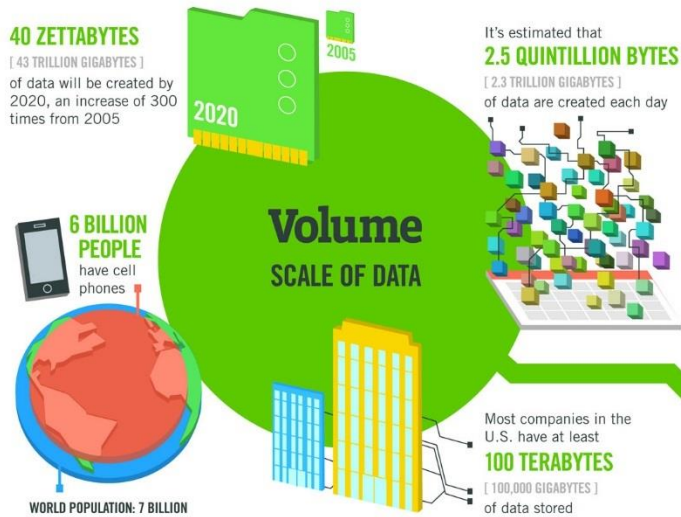
# APRESENTAÇÕES

- Alunos
  - Nome
  - Empresa ou área que pretende atuar
  - Expectativa com o curso
- Claudio Oliveira
  - Professor da ESPM, da Fundação Vanzolini – USP e do Digicorp da ECA-USP. Graduado, mestre e doutor pela Escola Politécnica, pesquisador ESPM Media Lab com diversos artigos publicados em congressos e periódicos nacionais e internacionais
  - Sócio da Cognitive Consultoria. Trabalha com Digital Analytics desde 2000, passando por empresas como Grupo Isobar, Accenture e Thomson Reuters.
  - Experiência em grandes projetos: Banco do Brasil Seguros, Mapfre, Volks, Twitter, Secretaria do Meio Ambiente do RJ, Pepsi, Havaianas, TAM, Oi, Comgás, Fiat, Brasil Telecom, Sadia entre outros

**Big Data muda  
profundamente  
ambiente de  
negócios**



# BIG DATA É BASEADO EM QUATRO V'S



## The FOUR V's of Big Data

From traffic patterns and music downloads to web history and medical records, data is recorded, stored, and analyzed to enable the technology and services that the world relies on every day. But what exactly is big data, and how can these massive amounts of data be used?

As a leader in the sector, IBM data scientists break big data into four dimensions: **Volume, Velocity, Variety and Veracity**

Depending on the industry and organization, big data encompasses information from multiple internal and external sources such as transactions, social media, enterprise content, sensors and mobile devices. Companies can leverage data to adapt their products and services to better meet customer needs, optimize operations and infrastructure, and find new sources of revenue.

By 2015  
**4.4 MILLION IT JOBS**  
will be created globally to support big data, with 1.9 million in the United States



As of 2011, the global size of data in healthcare was estimated to be

**150 EXABYTES**  
[ 161 BILLION GIGABYTES ]

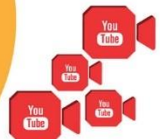


**30 BILLION PIECES OF CONTENT**  
are shared on Facebook every month



By 2014, it's anticipated there will be **420 MILLION WEARABLE, WIRELESS HEALTH MONITORS**

**4 BILLION+ HOURS OF VIDEO** are watched on YouTube each month



**400 MILLION TWEETS** are sent per day by about 200 million monthly active users



**Variety**  
DIFFERENT FORMS OF DATA

The New York Stock Exchange captures **1 TB OF TRADE INFORMATION** during each trading session



Modern cars have close to **100 SENSORS** that monitor items such as fuel level and tire pressure

**Velocity**  
ANALYSIS OF STREAMING DATA



By 2016, it is projected there will be **18.9 BILLION NETWORK CONNECTIONS** - almost 2.5 connections per person on earth



**1 IN 3 BUSINESS LEADERS**

don't trust the information they use to make decisions



Poor data quality costs the US economy around **\$3.1 TRILLION A YEAR**



**27% OF RESPONDENTS**

in one survey were unsure of how much of their data was inaccurate

**Veracity**  
UNCERTAINTY OF DATA



# Empresas vencedoras surfam no Big Data

Estudo do MIT Center for Digital Business e da Capgemini Consulting revela que empresas mais maduras digitalmente são 26% mais lucrativas<sup>1</sup>

BIG DATA  
EM  
NOSSAS  
VIDAS

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**KEEP  
CALM  
AND  
MÃOS  
À OBRA**

# INSTRUÇÕES

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## Passo 1 (Individual)

- Verifique seu histórico de locais visitados no celular
- Caso tenha iPhone faça o seguinte caminho:
  - Vá em **Ajustes > Privacidade > Serviços de Localização**. Então role até o final e acesse **Serviços do Sistema**, onde encontrará a opção **Locais Importantes**.
- Se tiver um celular com Android visite o site [myactivity.google.com](http://myactivity.google.com):
  - Vá em **Outra Atividade do Google > Visitar Linha do Tempo**

## Passo 2 (Em grupo)

- Responda às seguintes questões:
  - O monitoramento corresponde à realidade?
  - Quais os usos que o Google e a Apple devem fazer dessas informações?

# APLICAÇÕES DE BIG DATA

	E-Commerce and Market Intelligence	E-Government and Politics 2.0	Science & Technology	Smart Health and Wellbeing	Security and Public Safety
Applications	Recommenders systems Social media monitoring and analysis Crowd – sourcing systems Social and virtual games	Ubiquitous government services Equal access and public services Citizen engagement and participation Political campaign	S&T innovation Hypothesis testing Knowledge discovery	Human and plantgenomics Healthcare decision support Patient community analysis	Crime analysis Computational criminology Terrorism informatics Open-source intelligence Cyber security
Cases	Netflix	Trump Election ( <a href="https://www.showmetech.com.br/big-data-Trump">https://www.showmetech.com.br/big-data-Trump</a> )	Discoveries about the first human being	The Flu epidemics prediction	“Lava jato”

Fonte: Business intelligence and analytics: from big data to big impact




# IMPLICAÇÕES PARA O SETOR PÚBLICO

- Políticas públicas de saúde
- Efeitos no trânsito das cidades
- Papel nas investigações como Lava Jato

# ANÚNCIOS E CONTEÚDOS BASEADOS NO INTERESSE DOS INTERNAUTAS

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## Greece wants Germany to repay €279bn it was forced to loan the Nazi authorities during WWII





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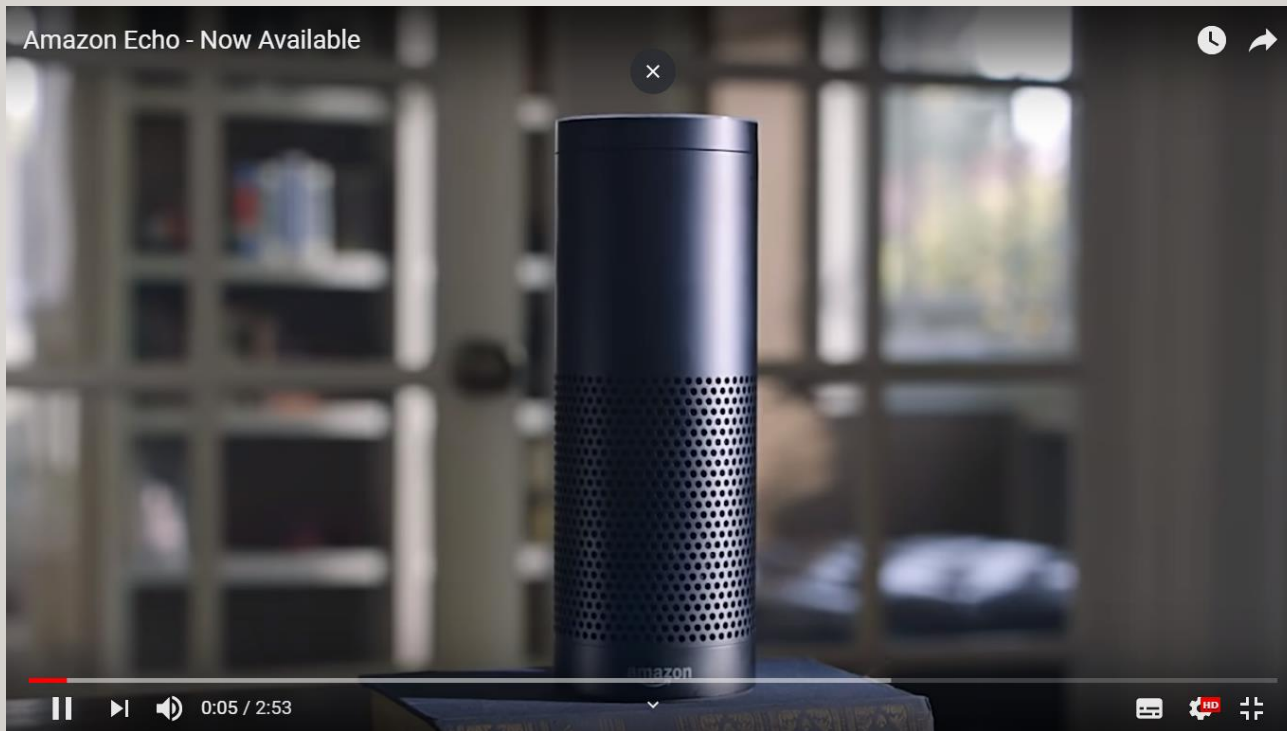
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# AMAZON ALEXA FUNCIONA COMO ASSISTENTE DOMICILIAR



Fonte: [https://www.youtube.com/watch?time\\_continue=12&v=FQn6aFQwBQU](https://www.youtube.com/watch?time_continue=12&v=FQn6aFQwBQU)

# AMAZON ENTREGA ANTES DO CONSUMIDOR COMPRAR

## Amazon Patents “Anticipatory” Shipping – To Start Sending Stuff Before You’ve Bought It

Posted Jan 18, 2014 by [Natasha Lomas \(@riptari\)](#)

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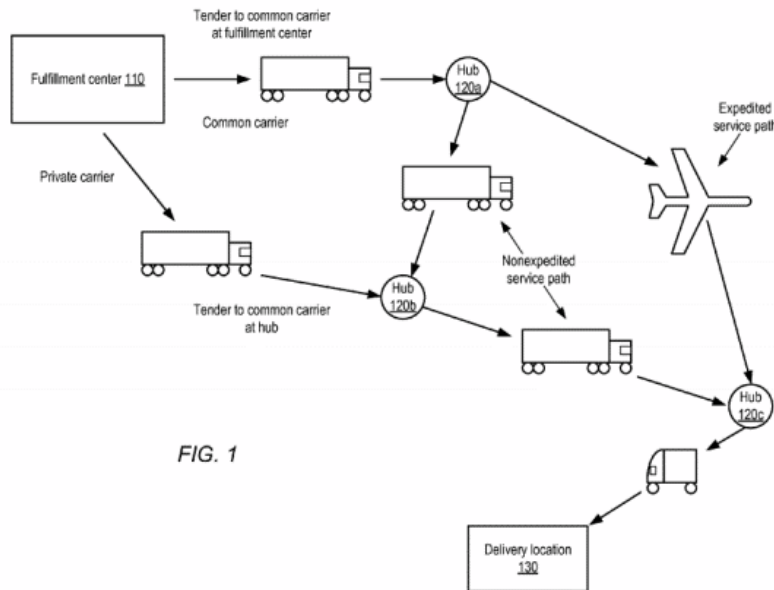


FIG. 1

U.S. Patent

Dec. 24, 2013

Sheet 1 of 11

US 8,615,473 B2

Fonte: [www.techcrunch.com/2014/01/18/amazon-pre-ships/](http://www.techcrunch.com/2014/01/18/amazon-pre-ships/)

# DEPÓSITOS SÃO EQUIPADOS COM ROBÔS QUE AUTOMATIZAM A COLETA DE PEDIDOS



Fonte: [www1.folha.uol.com.br/tec/2018/11/amazon-e-wallmart-prometem-revolucionar-varejo-com-nuvem-fisica.shtml](http://www1.folha.uol.com.br/tec/2018/11/amazon-e-wallmart-prometem-revolucionar-varejo-com-nuvem-fisica.shtml)

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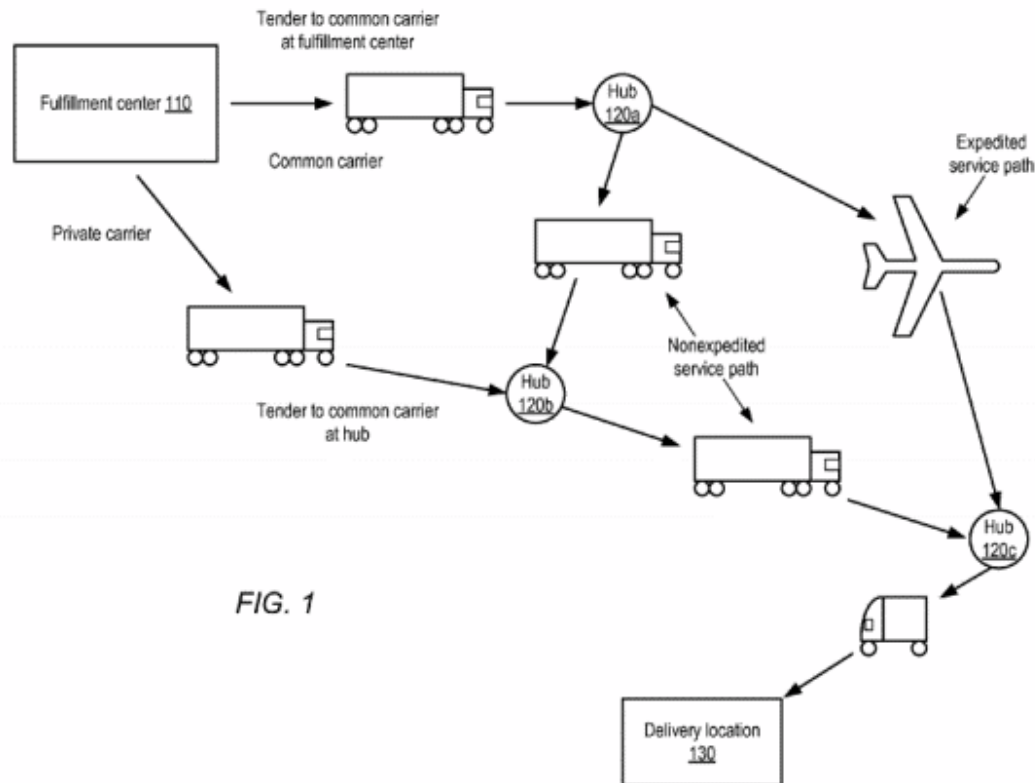


FIG. 1

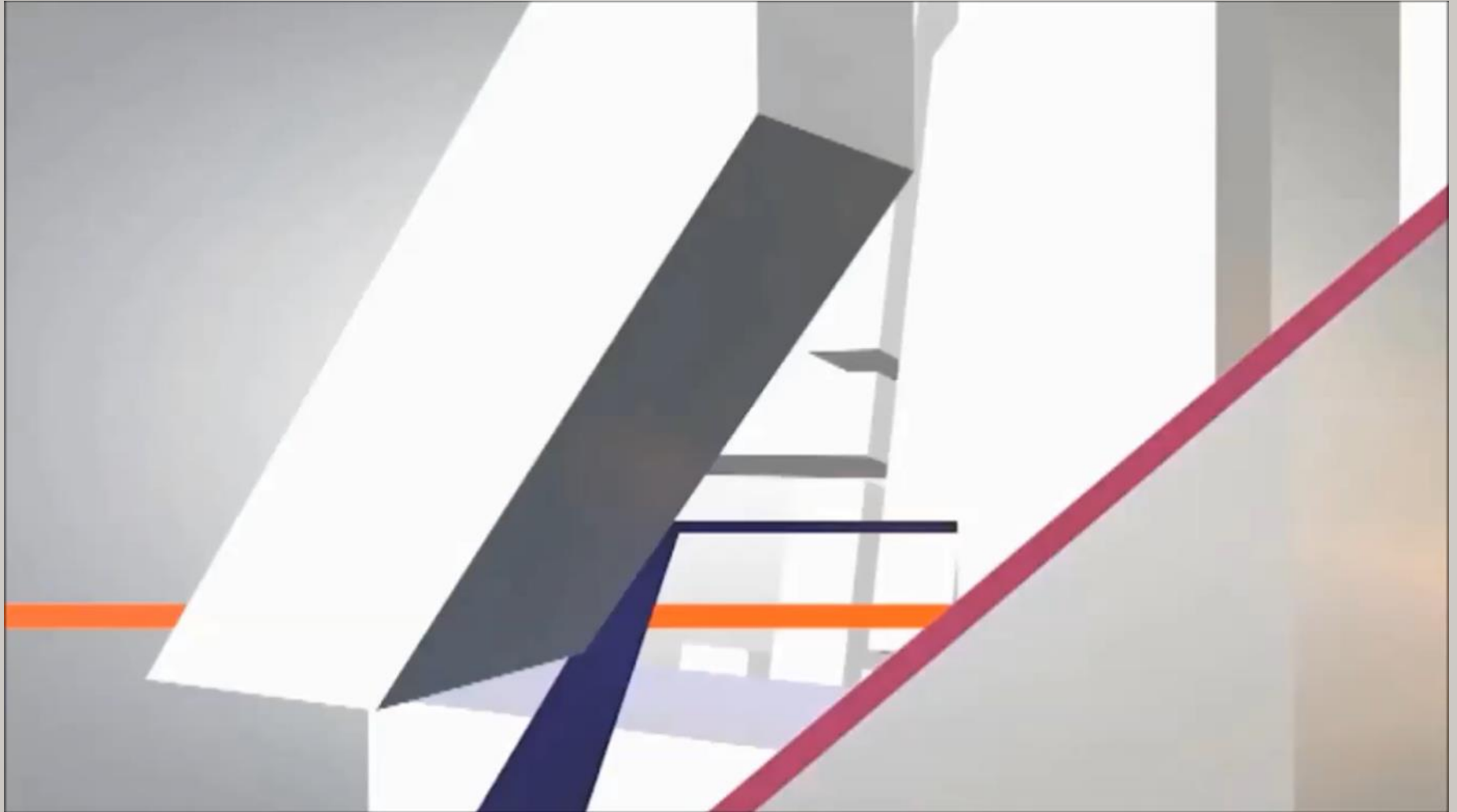
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Sheet 1 of 11

US 8,615,473 B2

# NETFLIX TRANSFORMA CONHECIMENTO EM PRODUTOS DE SUCESSO



# VALOR DAS AÇÕES DE EMPRESAS QUE UTILIZAM BIG DATA CRESCE EXPRESSIVAMENTE



Fonte: <https://finance.yahoo.com>



# Estudo MIT classificou as **empresas em 4 categorias de acordo com Maturidade digital**



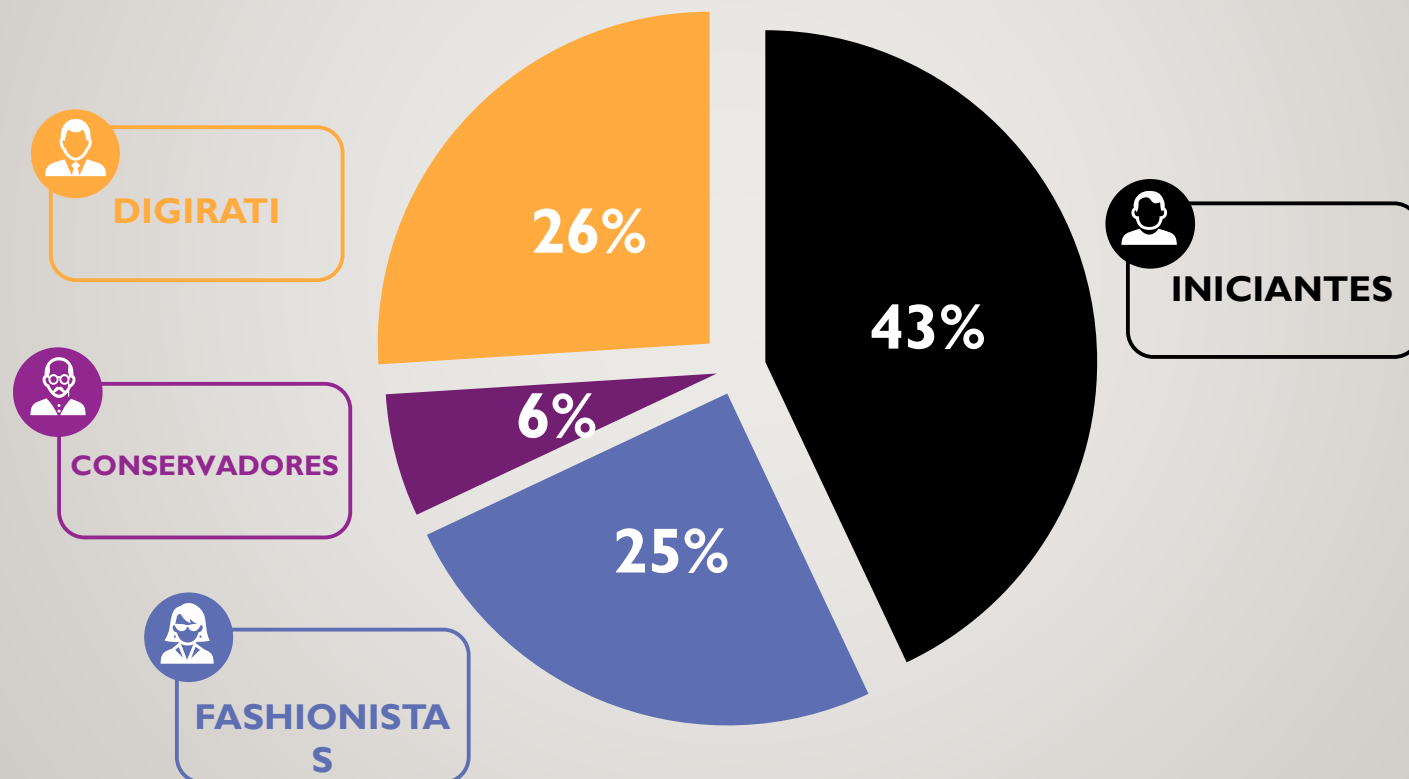
FONTES: Estudo do MIT Center for Digital Business e da Capgemini Consulting  
[www.capgemini.com/news/global-study-reveals-that-the-most-digitally-mature-companies/](http://www.capgemini.com/news/global-study-reveals-that-the-most-digitally-mature-companies/)

# DIGIRATI conseguem obter lucro 26% mais lucro que seus concorrentes



FONTE: Estudo do MIT Center for Digital Business e da Capgemini Consulting  
[www.capgemini.com/news/global-study-reveals-that-the-most-digitally-mature-companies/](http://www.capgemini.com/news/global-study-reveals-that-the-most-digitally-mature-companies/)

# No Brasil, a maior parte das empresas são **FASHIONISTAS**

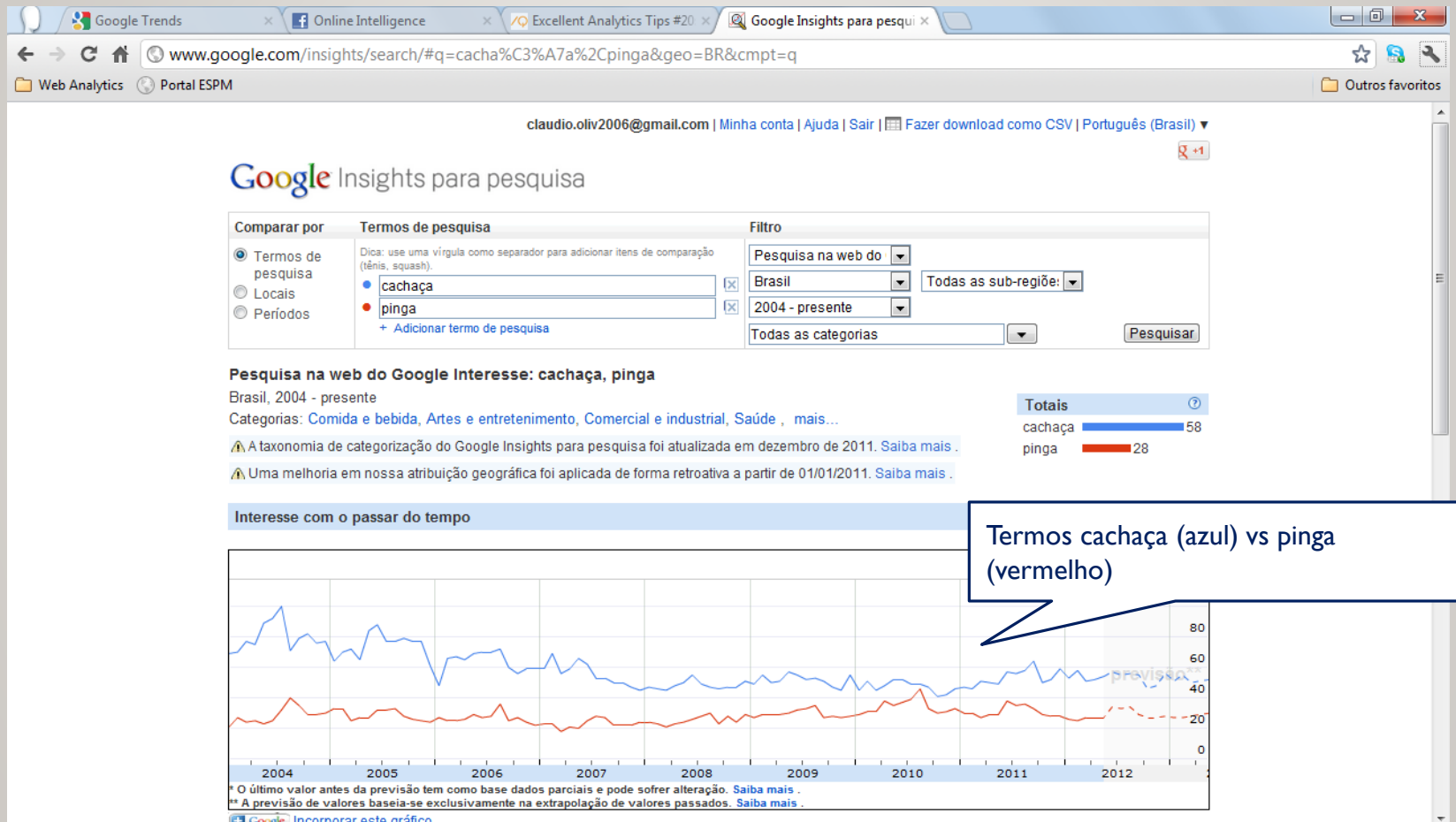


FONTE: Núcleo DIGI ESPM, 2020

# EXEMPLOS DE APLICAÇÕES

- Google Trends
- Google Analytics
- Answer The Public

# GOOGLE TRENDS MOSTRA TERMOS MAIS BUSCADOS



# GOOGLE ANALYTICS

- Visite a Google Merchandise Store e conheça a loja que está sendo monitorada pelo Google Analytics  
<https://www.googlemerchandisestore.com/>
- Acesse a página  
<https://support.google.com/analytics/answer/6367342?hl=en> e clique na opção ACCESS DEMO ACCOUNT.
- A conta aparecerá na home do seu Google Analytics como Demo Account Beta

