

DIGITAL CX FORUM

¿Esta tu empresa lista para la ágil
democratización y capitalización de
los datos en esta nueva normalidad?

Dante Tellez



Agenda

- Antecedentes (COVID-19)
- Big Data (de donde vienen tantos datos ?)
- Deuda Técnica (Technical Debt)
- Cultura de Datos (Data Literacy)
- Estrategia de Datos –Democratización y madurez (Gente - Procesos - Tecnología)
- Monetización – Capitalización de los Datos
- Inteligencia Artificial aplicaciones

Quarterly results

This article is more than 2 months old

Tech giants' shares soar as companies benefit from Covid-19 pandemic

Amazon, Apple, Facebook and Google reported positive quarterly results even as overall US economic growth fell by 32.9%



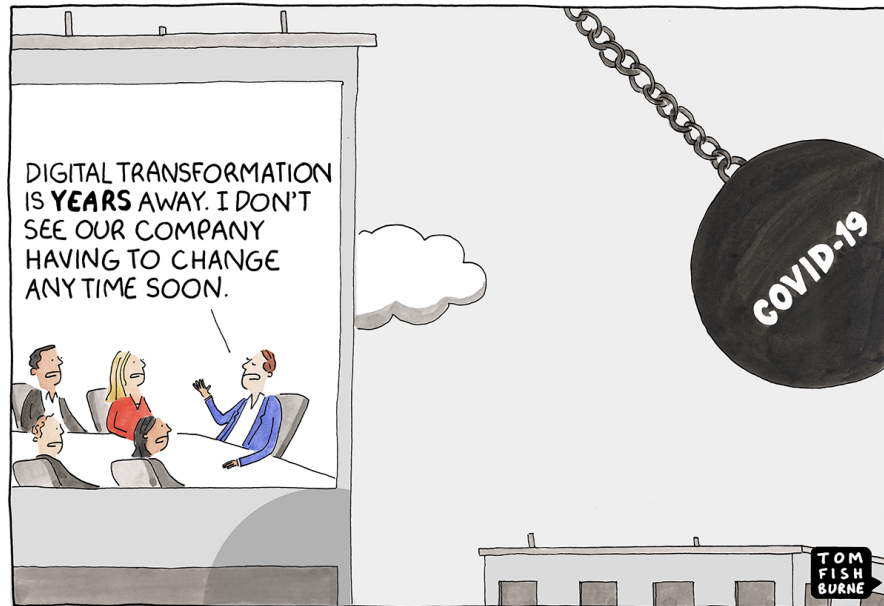
▲ The Amazon CEO, Jeff Bezos; Apple CEO, Tim Cook; Google CEO, Sundar Pichai; and Facebook CEO, Mark Zuckerberg. Photograph: Pablo Martinez Monsivais/Evan Vucci/Jeff Chiu/Jens Meyer/AP

Kari Paul in San Francisco and **Dominic Rushe** in New York

Thu 30 Jul 2020 17:27 EDT

Who led the digital transformation of your company?

- A) CEO
- B) CTO
- C) COVID-19



© marketoonist.com

COVID-19 UNOS CRECEN OTROS CAEN



El propietario de los medios más popular no crea contenido

El proveedor de alojamiento más grande no posee bienes raíces

Las plataformas de comunicación más grandes no poseen infraestructura de telecomunicaciones

El minorista más valioso del mundo no tiene inventario

La casa de cine más grande del mundo no tiene cines

THE LARGEST COMPANIES BY MARKET CAP

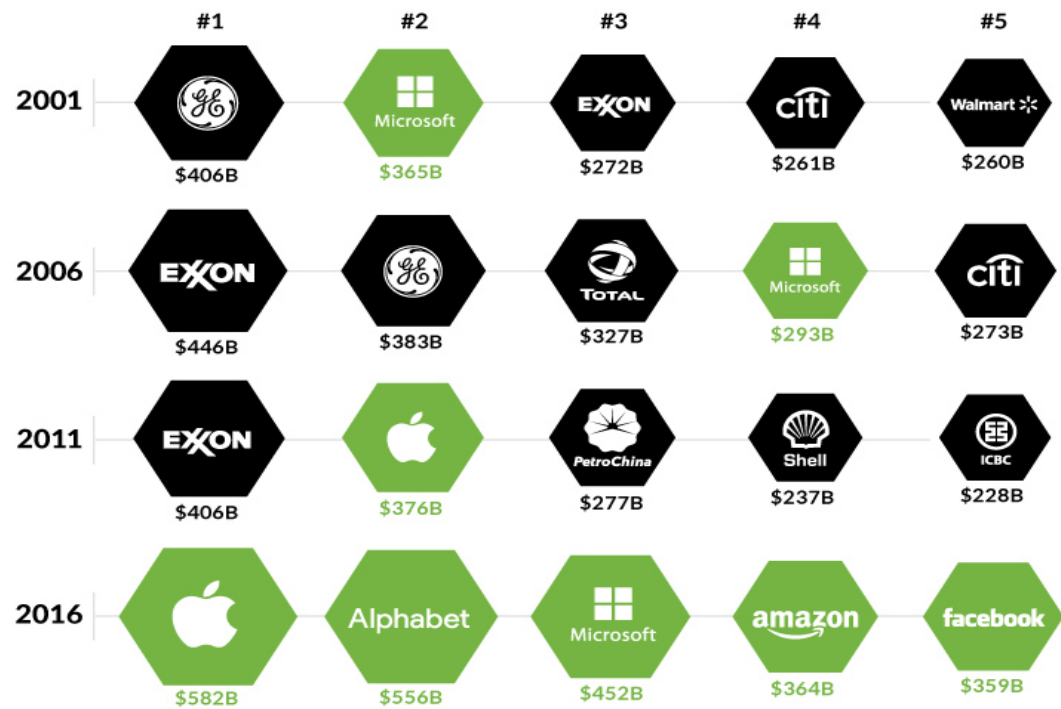
The oil barons have been replaced by the whiz kids of Silicon Valley



Top 5 Publicly Traded Companies (by Market Cap)

Tech

Other



visualcapitalist.com



Reserve



Extraction

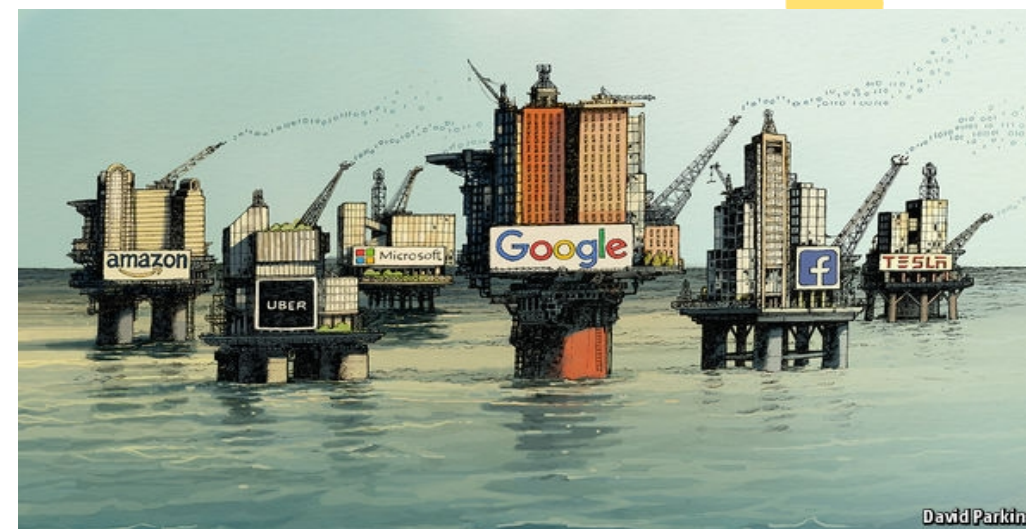


Refining

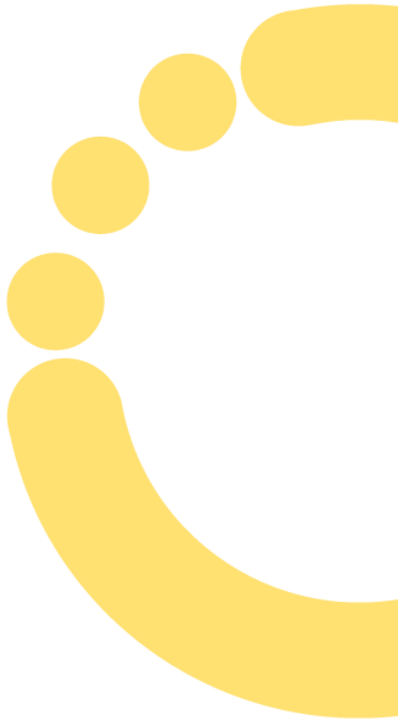


Product

If data is oil, where do we fit in?



David Parkins



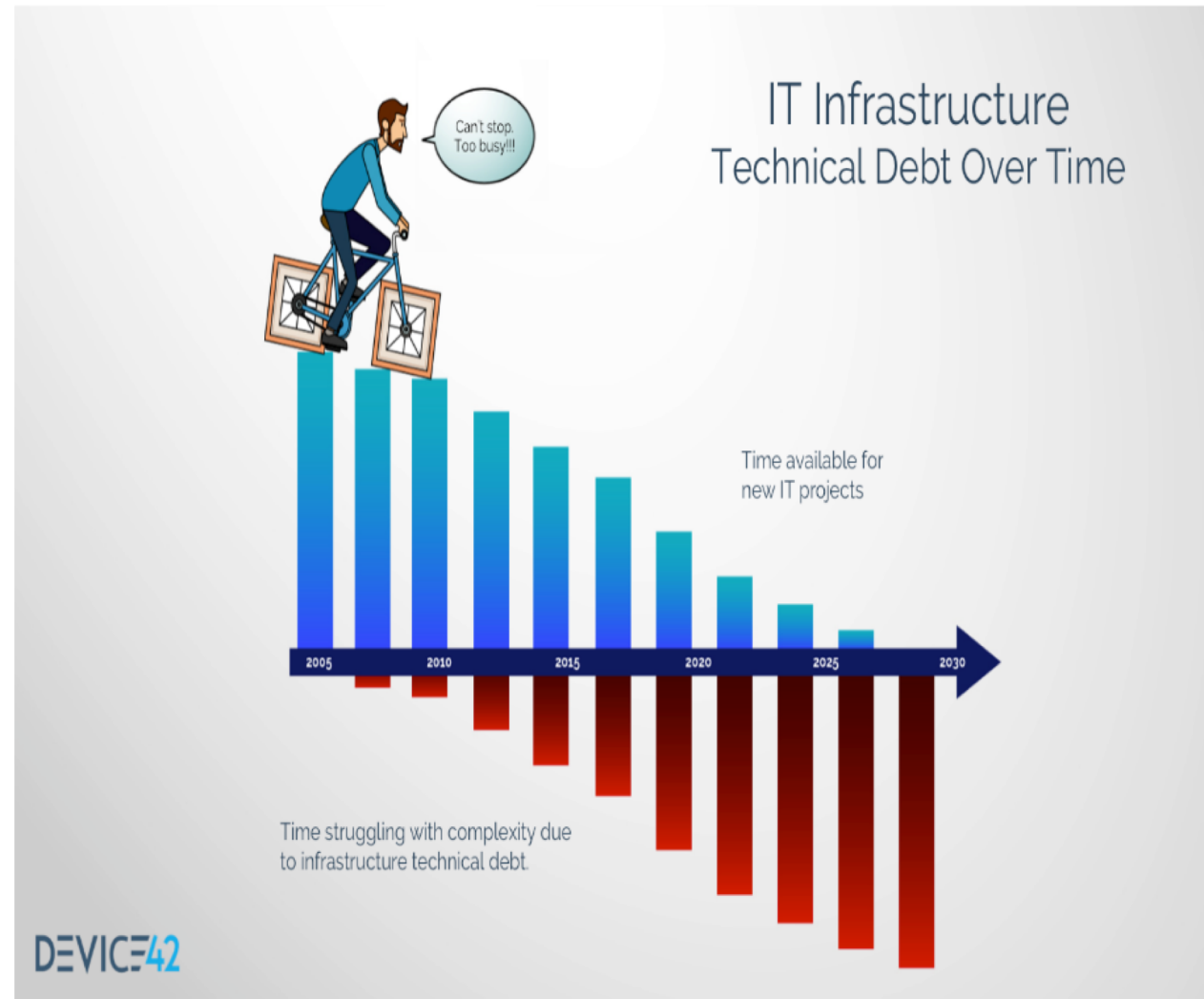
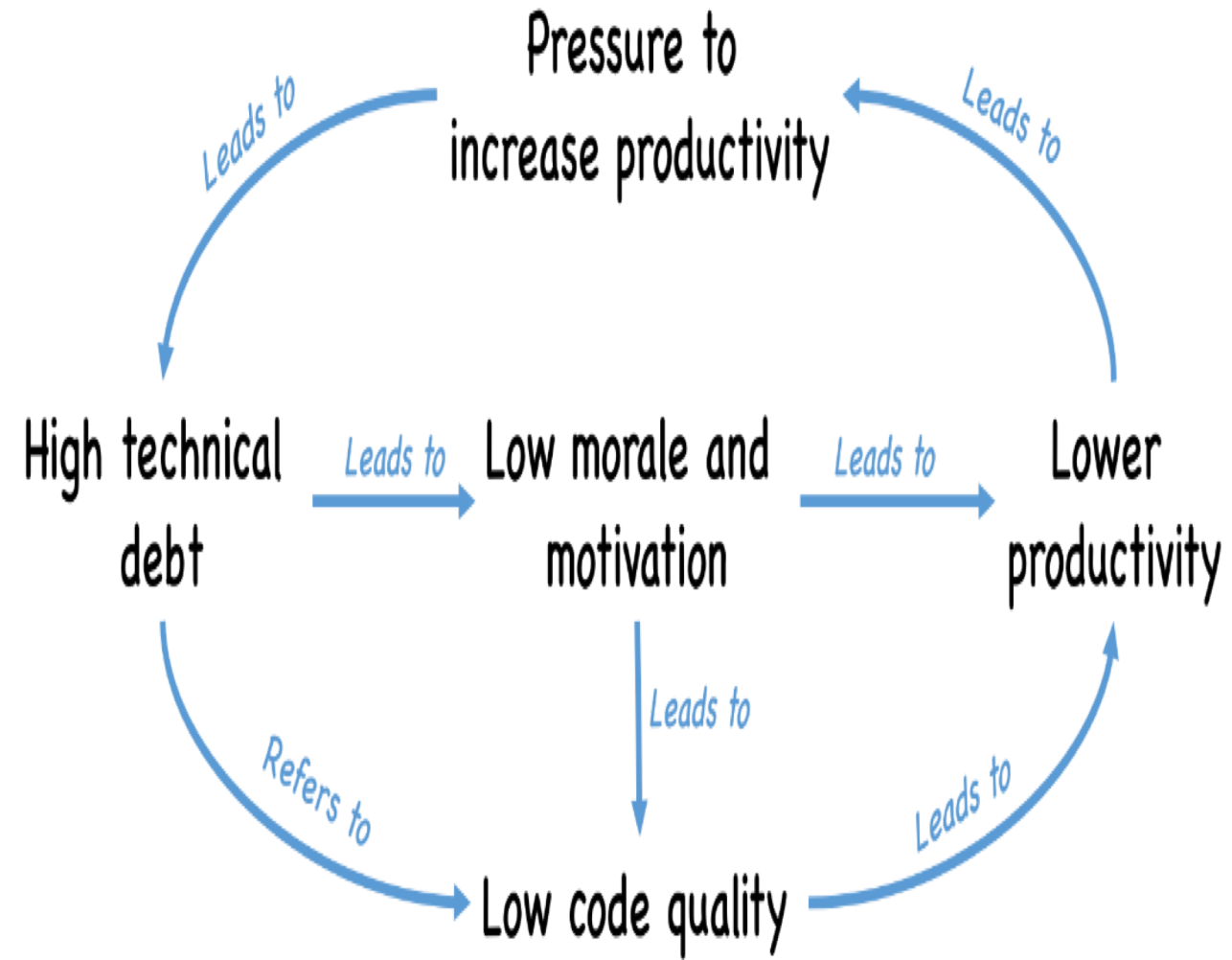
Primordialmente estos grandes datos son originados por Mobile y IoT



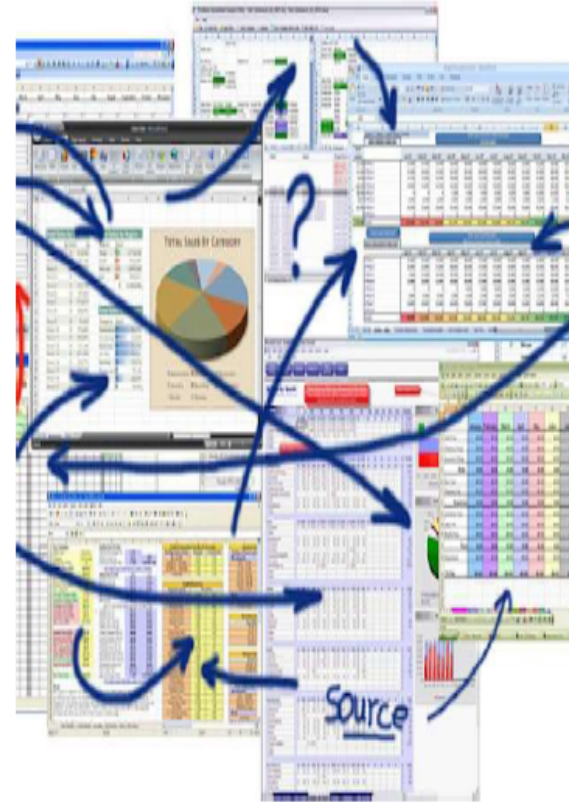
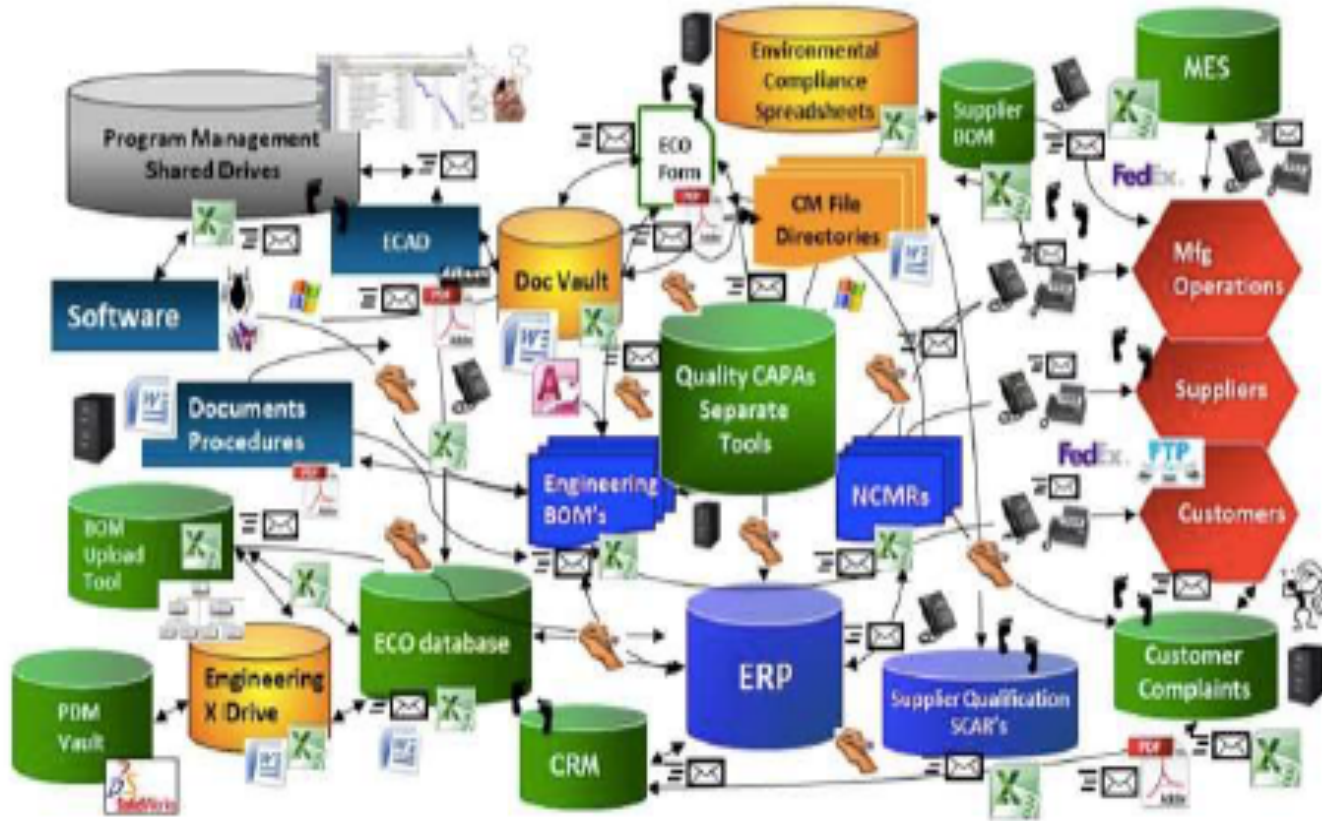
DID YOU KNOW THAT ONLY 0.5% OF WORLD'S DATA IS BEING ANALYZED...



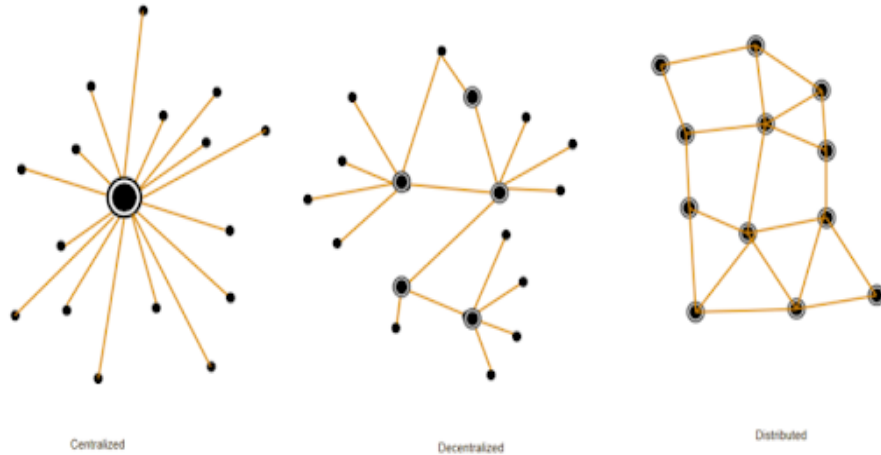
DEUDA TECNICA



DEUDA TECNICA



Cambia la cultura rompe círculos viciosos



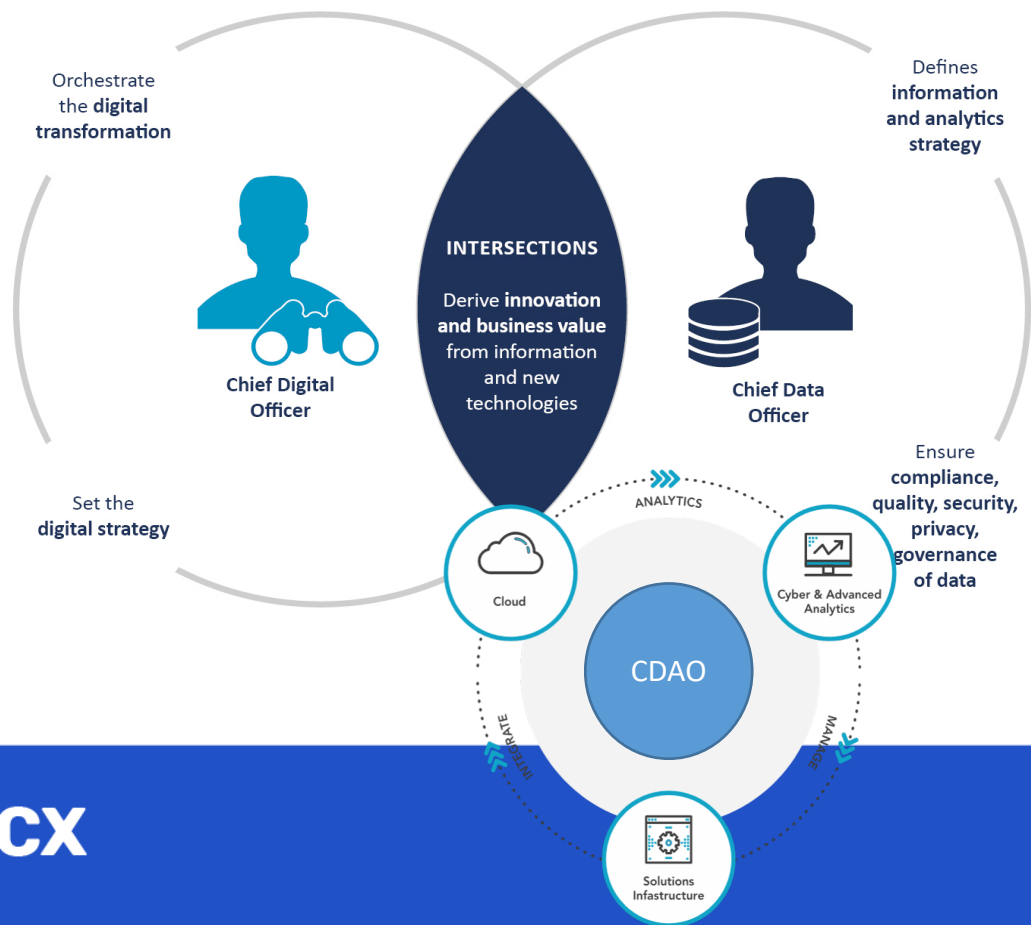
CULTURA

COLLABORATION OF CHIEF DIGITAL OFFICER WITH CHIEF DATA OFFICER
CREATES AN OPPORTUNITY FOR ENTERPRISES TO ORCHESTRATE THE DATA-DRIVEN
DIGITAL TRANSFORMATION

BUSINESS VIEW

DATA-DRIVEN DIGITAL
TRANSFORMATION

TECHNOLOGY VIEW



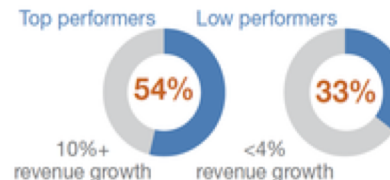
State of the CDO role

Who has a CDO?



of companies and governments worldwide have appointed a chief data officer.
Base: 3,005 global data and analytics decision makers

Top performers have CDOs



Top performers are 64% more likely to appoint a CDO.

Base: 728 global data and analytics decision-makers with <4% year-over-year revenue growth and 1,188 global data and analytics decision-makers with 10%+ year-over-year revenue growth

The Chief Data Officer

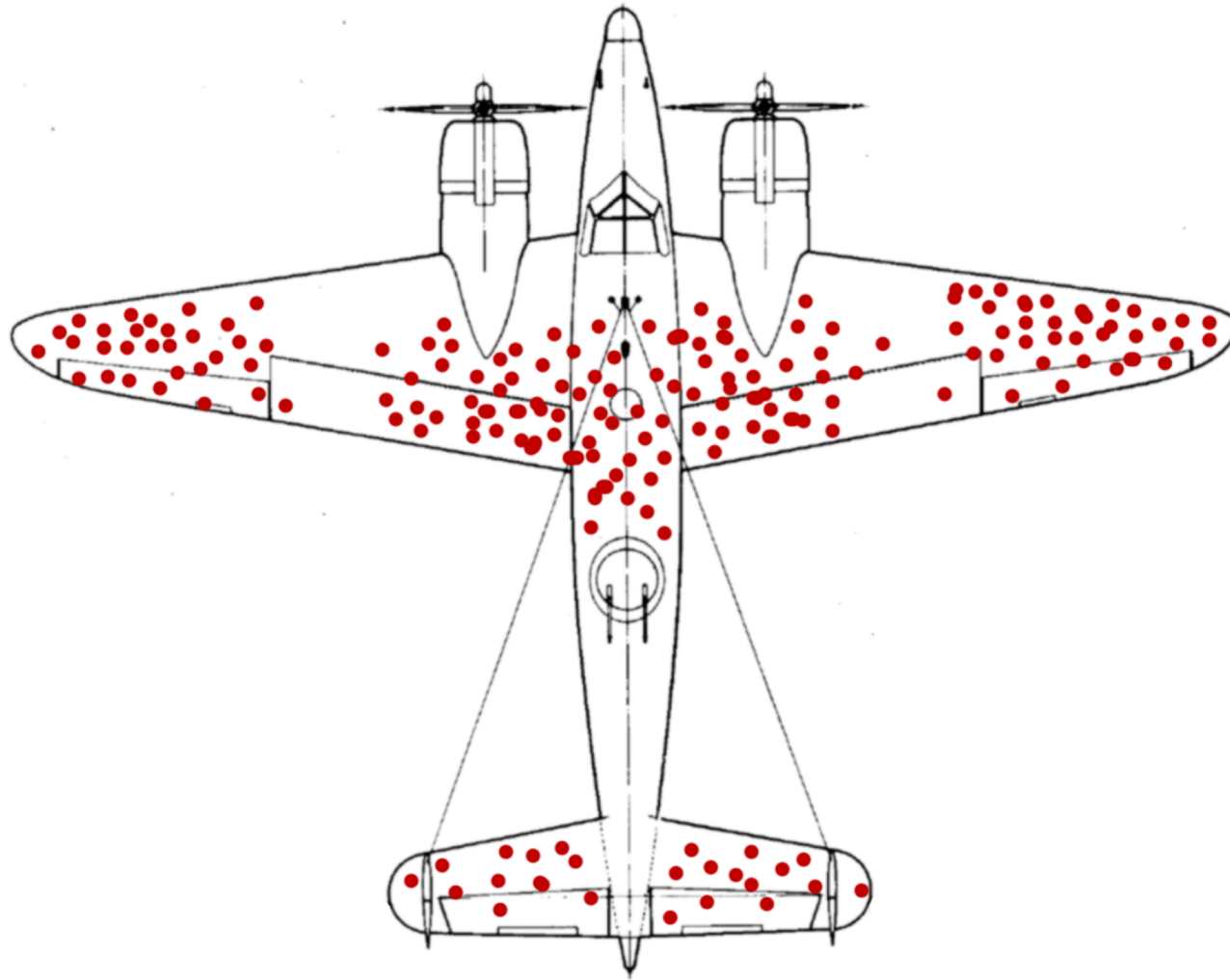
"... the executive suite needs someone who can oversee the strategic business application of its information assets enterprise-wide."

—Michelle Casey, CDO, Federal Reserve Board



For Leaders, **Trust** is a key element for developing and acting upon analytic insights. To instill trust in people and data you need a strong leader with a collaborative style.

Para avanzar en la Cultura hay que quitar sesgos



Bombarderos en la 2da guerra Mundial

Perdidas humanas y económicas de la mitad de los aviones bombarderos

Estadístico, Abraham Wald

El ejercito reforzo las áreas con mas impactos

Las perdidas continuaban

Lo hicieron justo al revés ,
reforzaron las áreas capaces de soportar balas

Para avanzar en la Cultura hay que pensar fuera de la caja

No mas Autos..



Libros Gratis..



Música Gratis..



La cultura empieza desde arriba

Enterprise Tech Roles: CIO/CTO/CDO

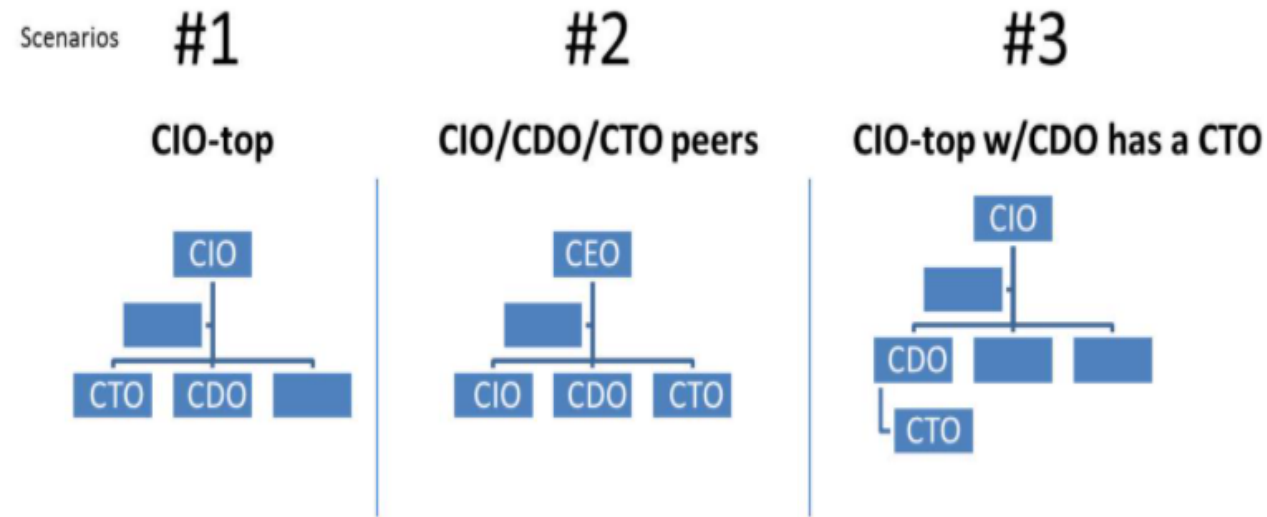
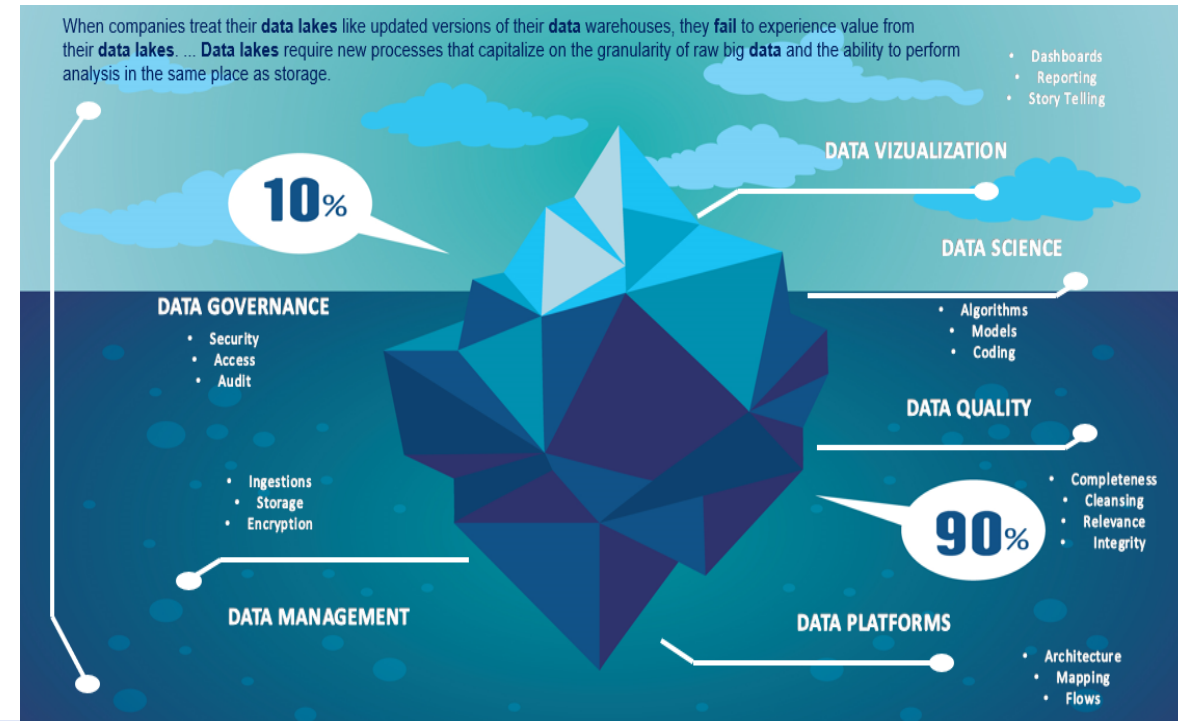
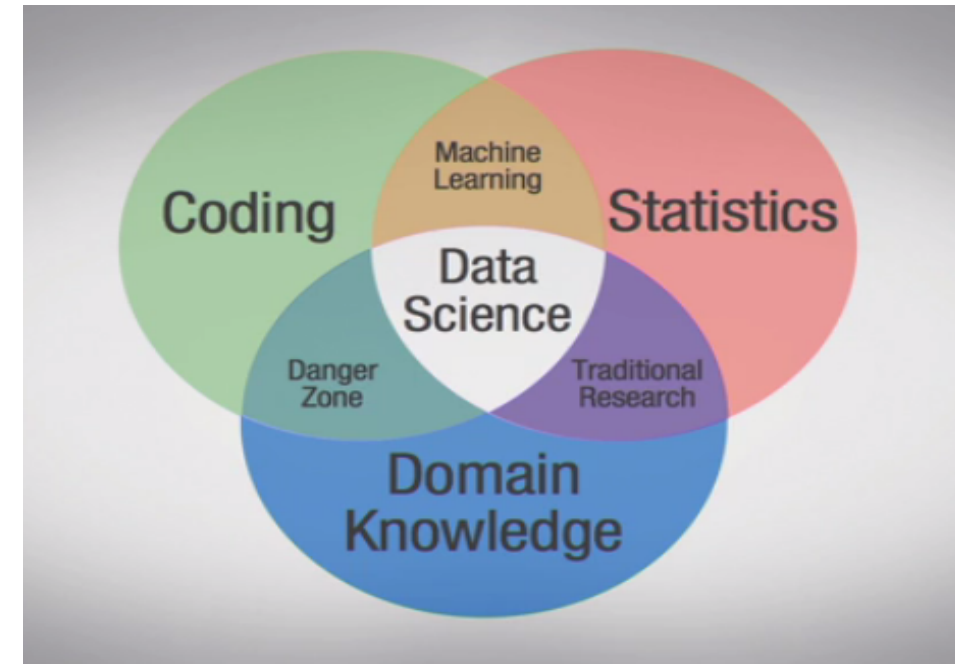
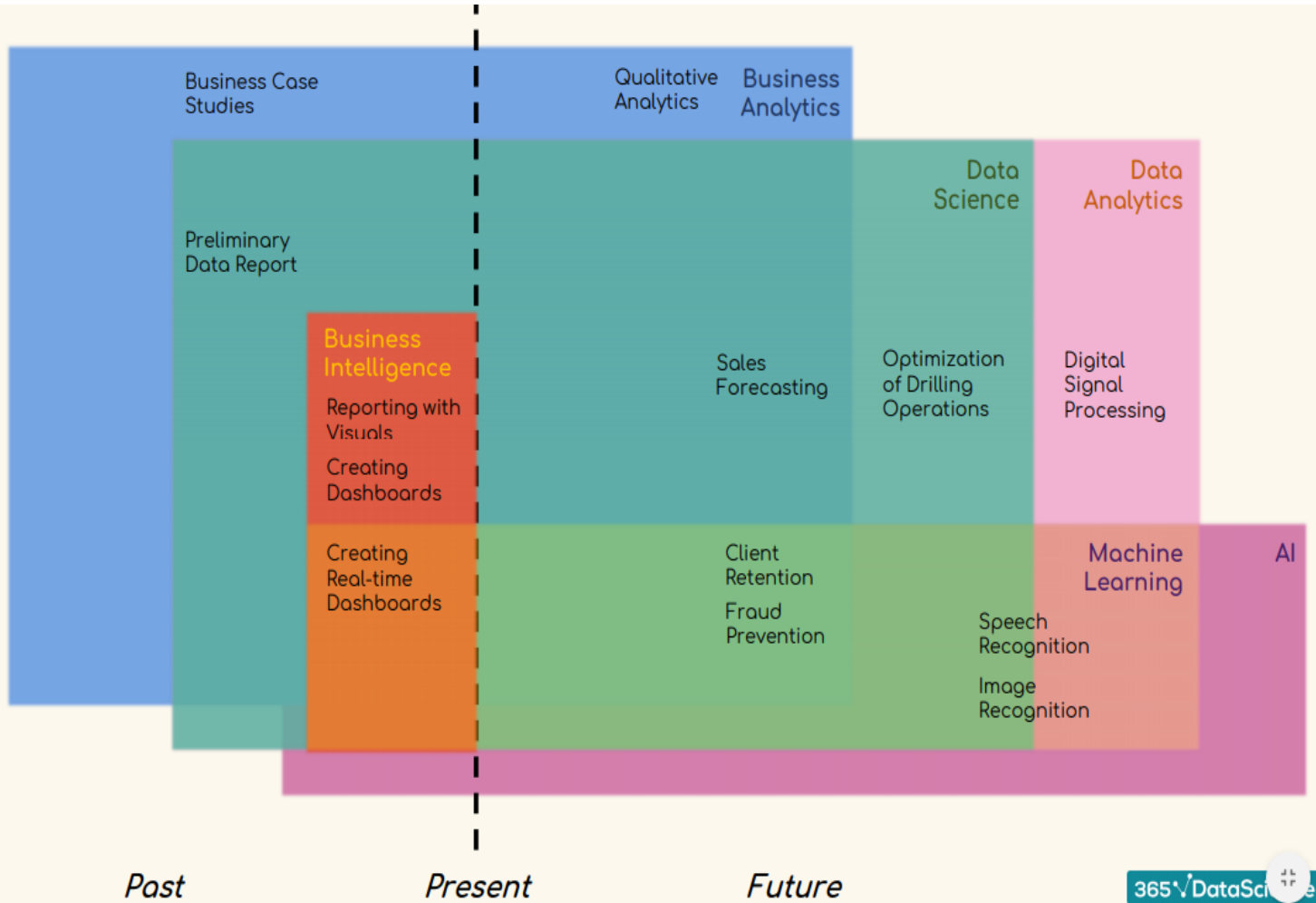


Figure 8: Eliot – Hierarchy involved in the CIO/CTO/CDO Enterprise Tech roles



TANTOS CONCEPTOS POR DONDE EMPIEZO? MINERIA , BI, ANALYTICS,DS, ML,AI



Los nuevos perfiles que impulsan la cultura analítica

MODERN DATA SCIENTIST

Data Scientist, the sexiest job of 21th century requires a mixture of multidisciplinary skills ranging from an intersection of mathematics, statistics, computer science, communication and business. Finding a data scientist is hard. Finding people who understand who a data scientist is, is equally hard. So here is a little cheat sheet on who the modern data scientist really is.

MATH & STATISTICS

- ☆ Machine learning
- ☆ Statistical modeling
- ☆ Experiment design
- ☆ Bayesian inference
- ☆ Supervised learning: decision trees, random forests, logistic regression
- ☆ Unsupervised learning: clustering, dimensionality reduction
- ☆ Optimization: gradient descent and variants



DOMAIN KNOWLEDGE & SOFT SKILLS

- ☆ Passionate about the business
- ☆ Curious about data
- ☆ Influence without authority
- ☆ Hacker mindset
- ☆ Problem solver
- ☆ Strategic, proactive, creative, innovative and collaborative

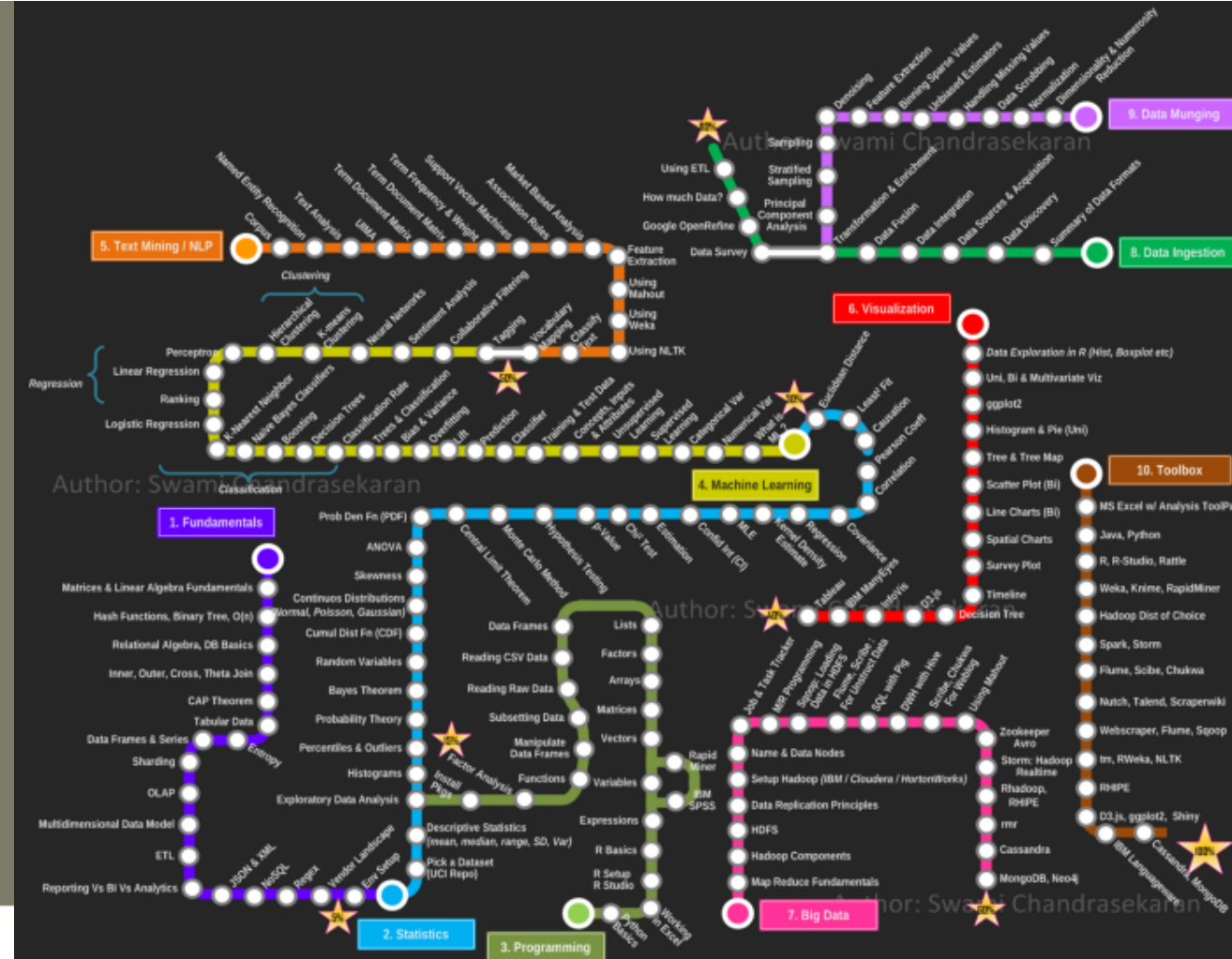
PROGRAMMING & DATABASE

- ☆ Computer science fundamentals
- ☆ Scripting language e.g. Python
- ☆ Statistical computing package e.g. R
- ☆ Databases SQL and NoSQL
- ☆ Relational algebra
- ☆ Parallel databases and parallel query processing
- ☆ MapReduce concepts
- ☆ Hadoop and Hive/Pig
- ☆ Custom reducers
- ☆ Experience with xaaS like AWS

COMMUNICATION & VISUALIZATION

- ☆ Able to engage with senior management
- ☆ Story telling skills
- ☆ Translate data-driven insights into decisions and actions
- ☆ Visual art design
- ☆ R packages like ggplot or lattice
- ☆ Knowledge of any of visualization tools e.g. Flare, D3.js, Tableau

MarketingDistillery.com is a group of practitioners in the area of e-commerce marketing. Our fields of expertise include: marketing strategy and optimization: customer tracking and on-site analytics: predictive analytics and econometrics: data warehousing and big data systems: marketing channel insights in Paid Search, SEO, Social, CRM and brand.



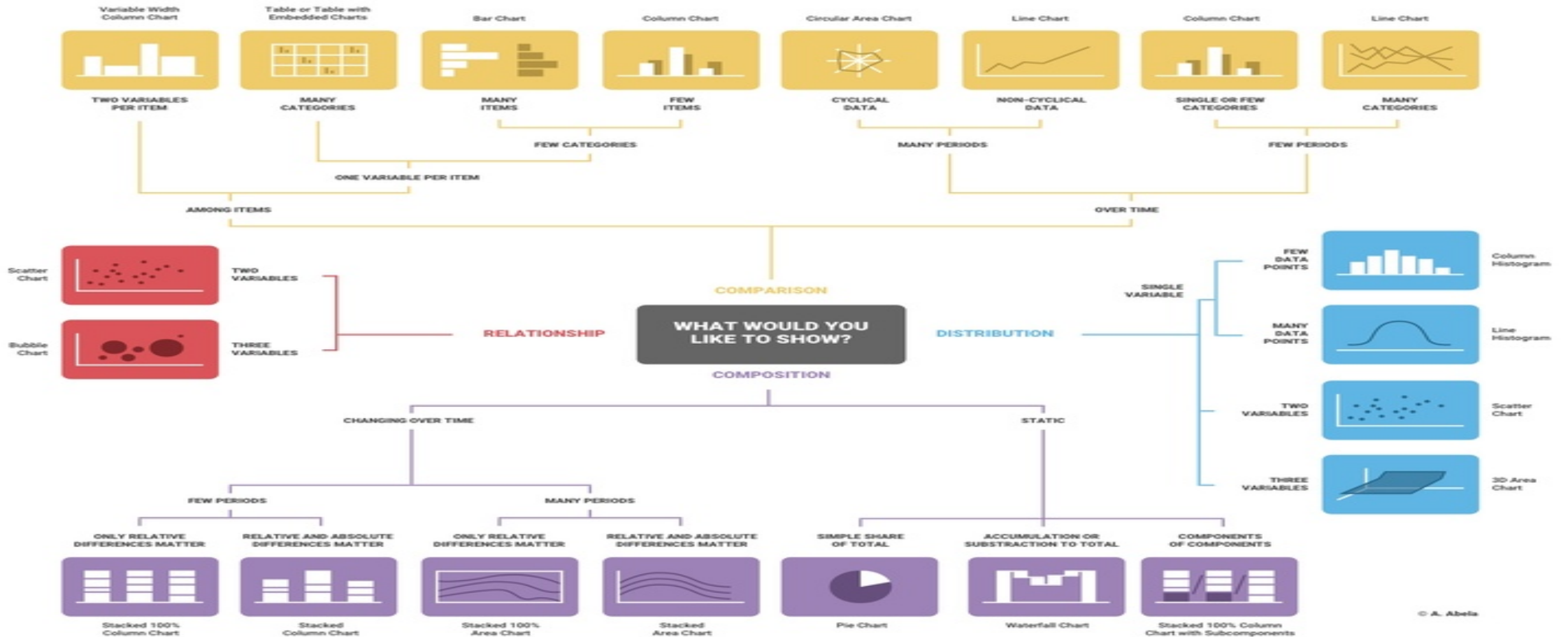
Cultura Analytica Curiosidad ,Creatividad, y Pensamiento Critico



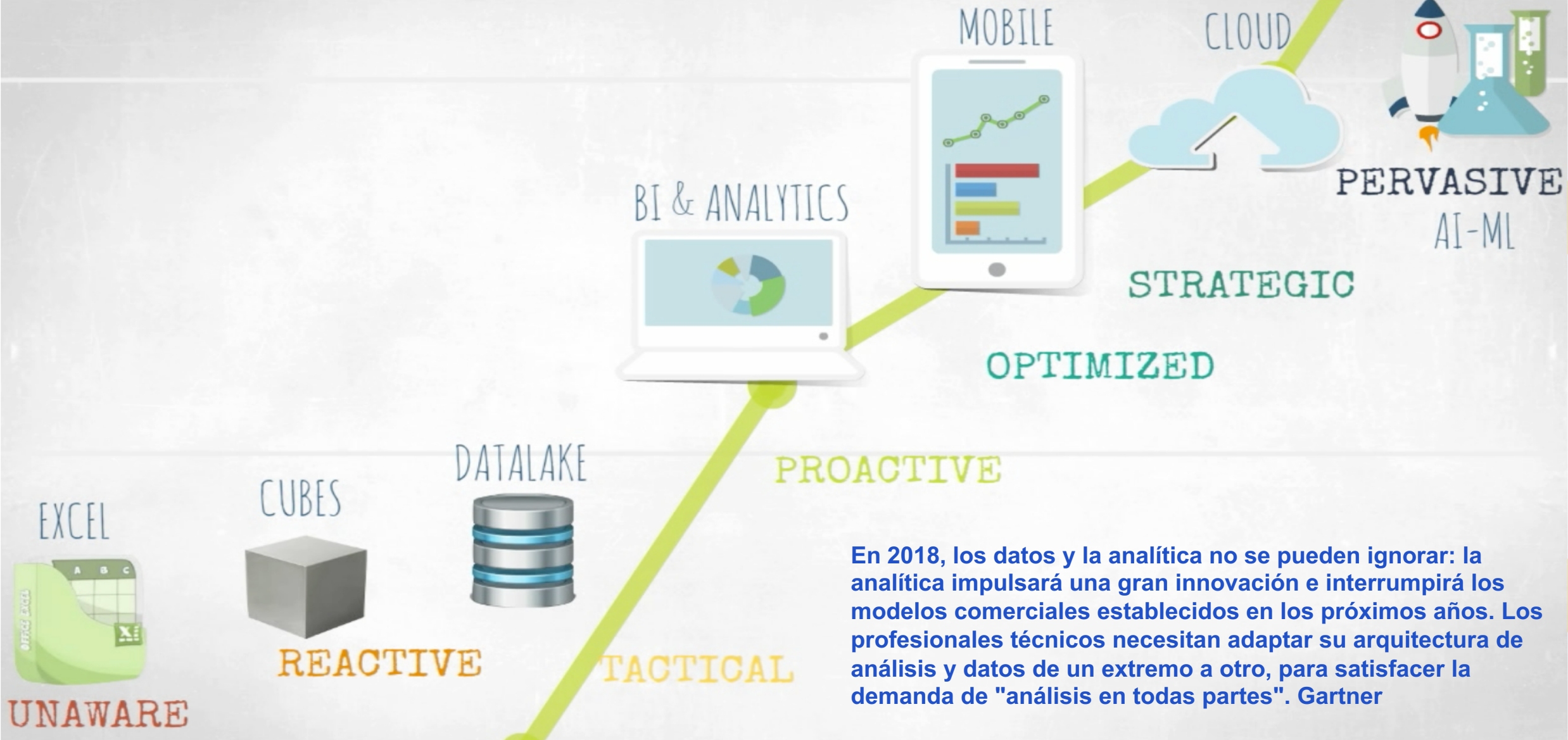
Category	Sub-Category	Customer Segment			
		Consumer	Corporate	Home Office	Small Business
Furniture	Bookcases	(\$63)	(\$9,306)	(\$16,611)	(\$7,602)
	Chairs & Chairmats	\$42,943	\$39,370	\$41,686	\$25,650
	Office Furnishings	\$12,100	\$27,374	\$42,196	\$18,757
	Tables	(\$12,252)	(\$35,431)	(\$43,292)	(\$8,088)
Office Supplies	Appliances	\$15,501	\$50,096	\$25,343	\$6,218
	Binders and Binder Accessories	\$48,035	\$125,811	\$71,674	\$61,892
	Envelopes	\$6,732	\$15,083	\$10,848	\$15,520
	Labels	\$1,349	\$5,608	\$3,073	\$3,645
	Paper	\$8,827	\$10,539	\$11,585	\$14,311
	Pens & Art Supplies	\$2,621	\$1,670	\$1,581	\$1,691
	Rubber Bands	\$272	(\$354)	(\$93)	\$72
	Scissors, Rulers and Trimmers	(\$558)	(\$3,331)	(\$2,844)	(\$1,066)
Technology	Storage & Organization	\$5,753	(\$2,087)	(\$23)	\$3,022
	Computer Peripherals	\$14,153	\$45,093	\$17,771	\$17,271
	Copiers and Fax	\$41,310	\$28,654	\$29,283	\$68,113
	Office Machines	\$51,455	\$180,356	\$39,386	\$36,516
	Telephones and Communication	\$49,781	\$120,597	\$86,789	\$59,785

Category	Sub-Category	Customer Segment			
		Consumer	Corporate	Home Office	Small Business
Furniture	Bookcases	-63.02	-9,305.76	-16,610.95	-7,602.40
	Chairs & Chairmats	42,942.97	39,370.10	41,686.28	25,650.38
	Office Furnishings	12,099.80	27,374.47	42,196.25	18,757.40
	Tables	-12,251.51	-35,430.73	-43,292.40	-8,087.89
Office Supplies	Appliances	15,501.48	50,095.94	25,343.06	6,217.58
	Binders and Binder Ac..	48,035.27	125,811.27	71,674.19	61,892.69
	Envelopes	6,731.55	15,082.58	10,848.34	15,520.13
	Labels	1,349.23	5,608.87	3,073.87	3,645.20
	Paper	8,826.74	10,539.22	11,585.92	14,311.32
	Pens & Art Supplies	2,621.68	1,670.40	1,580.82	1,691.88
	Rubber Bands	271.85	-353.54	-93.12	72.14
	Scissors, Rulers and ..	-558.10	-3,330.62	-2,844.06	-1,066.47
Technology	Storage & Organization	5,752.65	-2,086.83	-23.24	3,021.57
	Computer Peripherals	14,152.79	45,092.93	17,771.05	17,270.71
	Copiers and Fax	41,310.35	28,654.48	29,283.14	68,113.50
	Office Machines	51,454.78	180,356.22	39,386.23	36,515.70
	Telephones and Com..	49,781.48	120,596.92	86,788.72	59,784.52

Comunicación Efectiva de Información Compleja

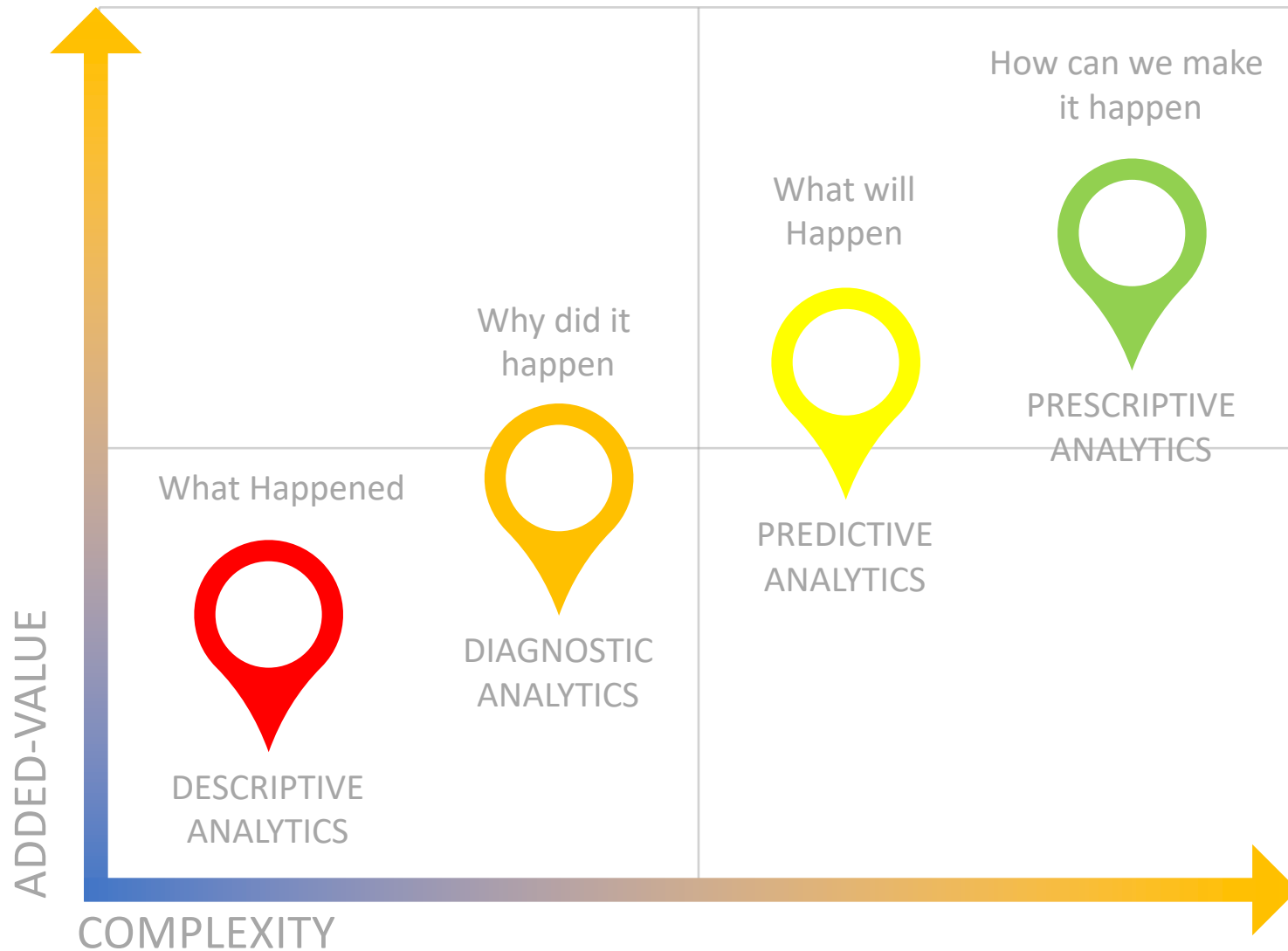


<https://infogram.com/page/choose-the-right-chart-data-visualization>

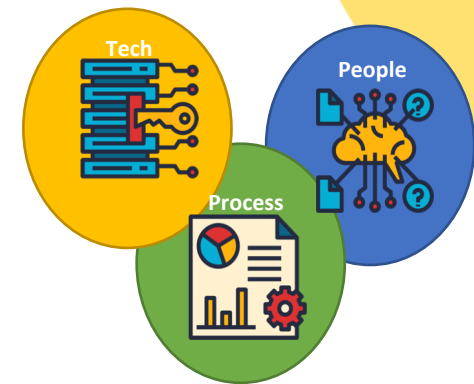


En 2018, los datos y la analítica no se pueden ignorar: la analítica impulsará una gran innovación e interrumpirá los modelos comerciales establecidos en los próximos años. Los profesionales técnicos necesitan adaptar su arquitectura de análisis y datos de un extremo a otro, para satisfacer la demanda de "análisis en todas partes". Gartner

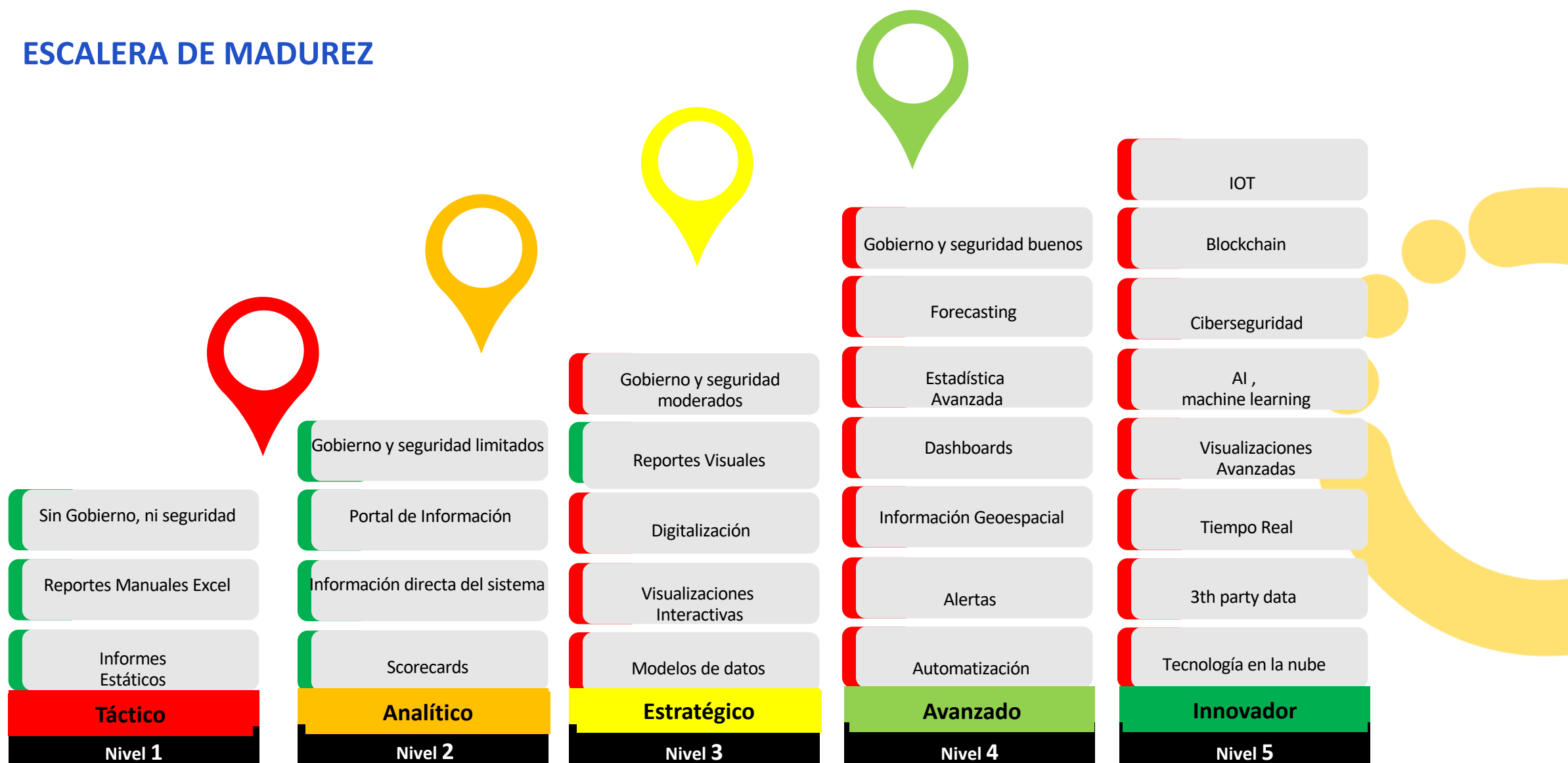
EVALUEMOS LA MADUREZ DE DATOS ACTUAL DE TU COMPAÑÍA



- Data Literacy
- Data Driven
- Hard Governance
- Lack of Flexibility
- Lack of Scalability
- Lack of Executive Support
- Lack of Capabilities



ESCALERA DE MADUREZ

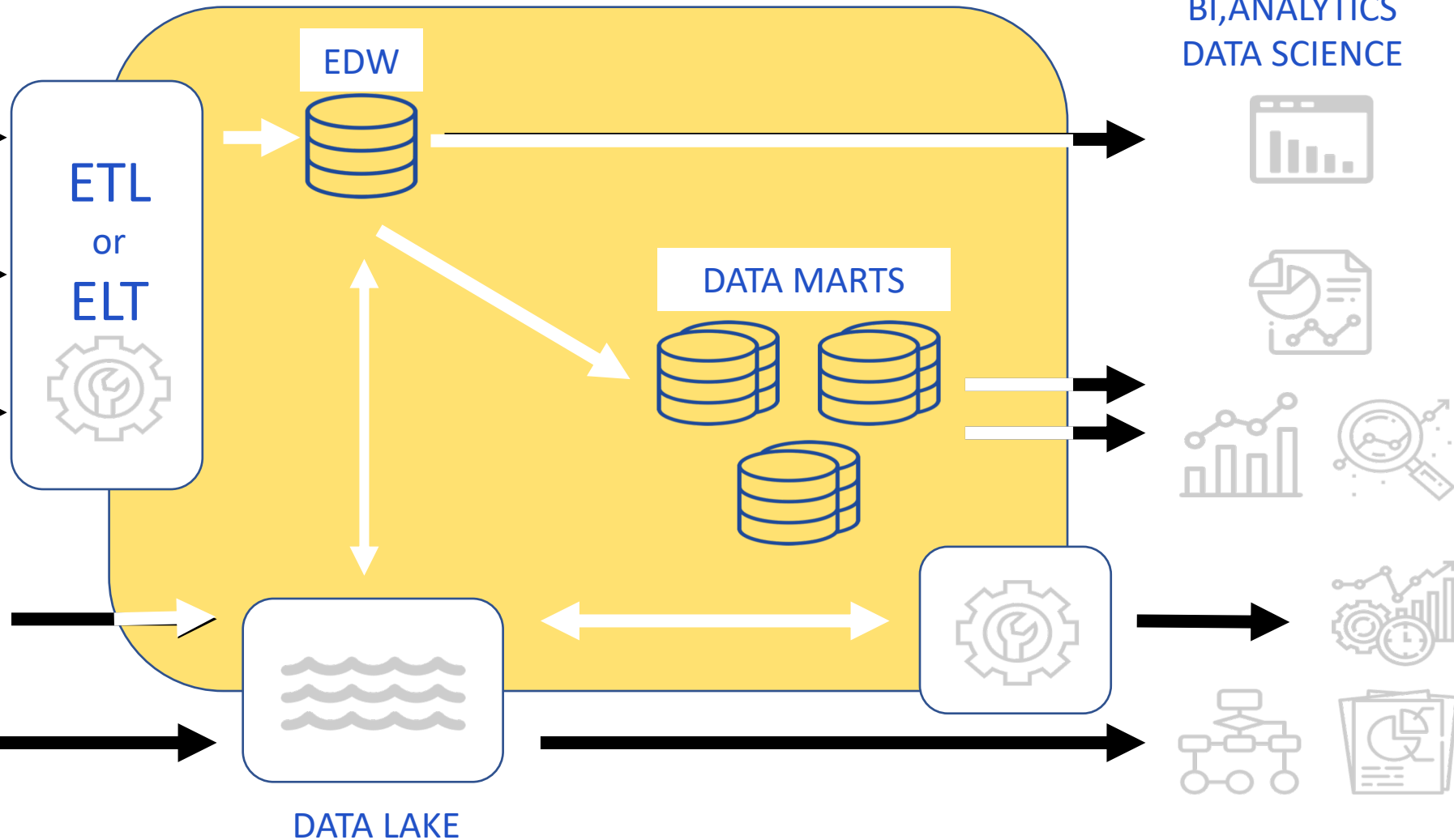
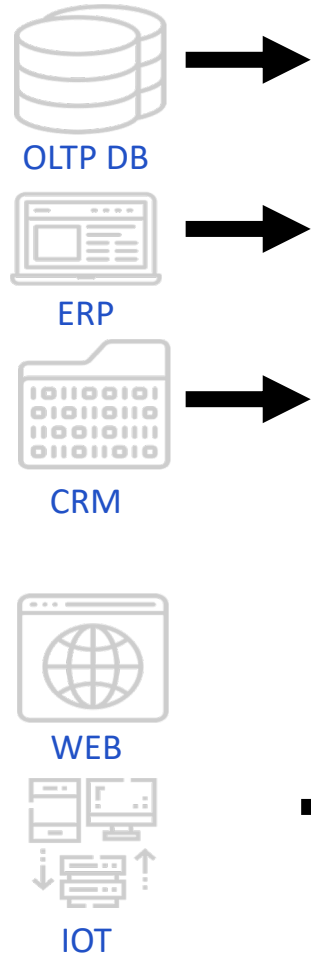




Escoge las
herramientas
correctas

TECNOLOGIA Y PROCESOS PARA LA MADUREZ

DATA SOURCES

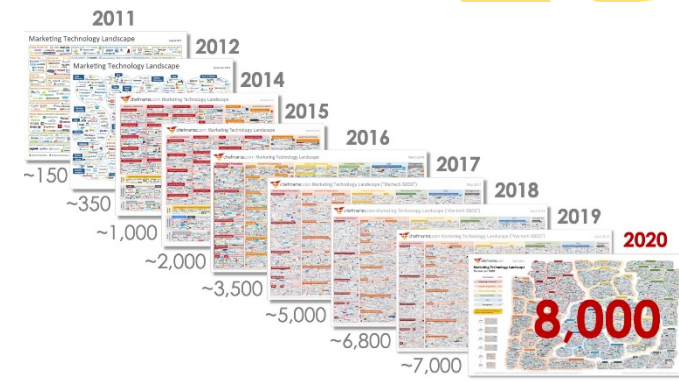


BI, ANALYTICS
DATA SCIENCE

Muchas Herramientas ?

External Promotion Customer Experience Marketing Management

by Scott Brinker @chiefmartec <http://www.chiefmartec.com>



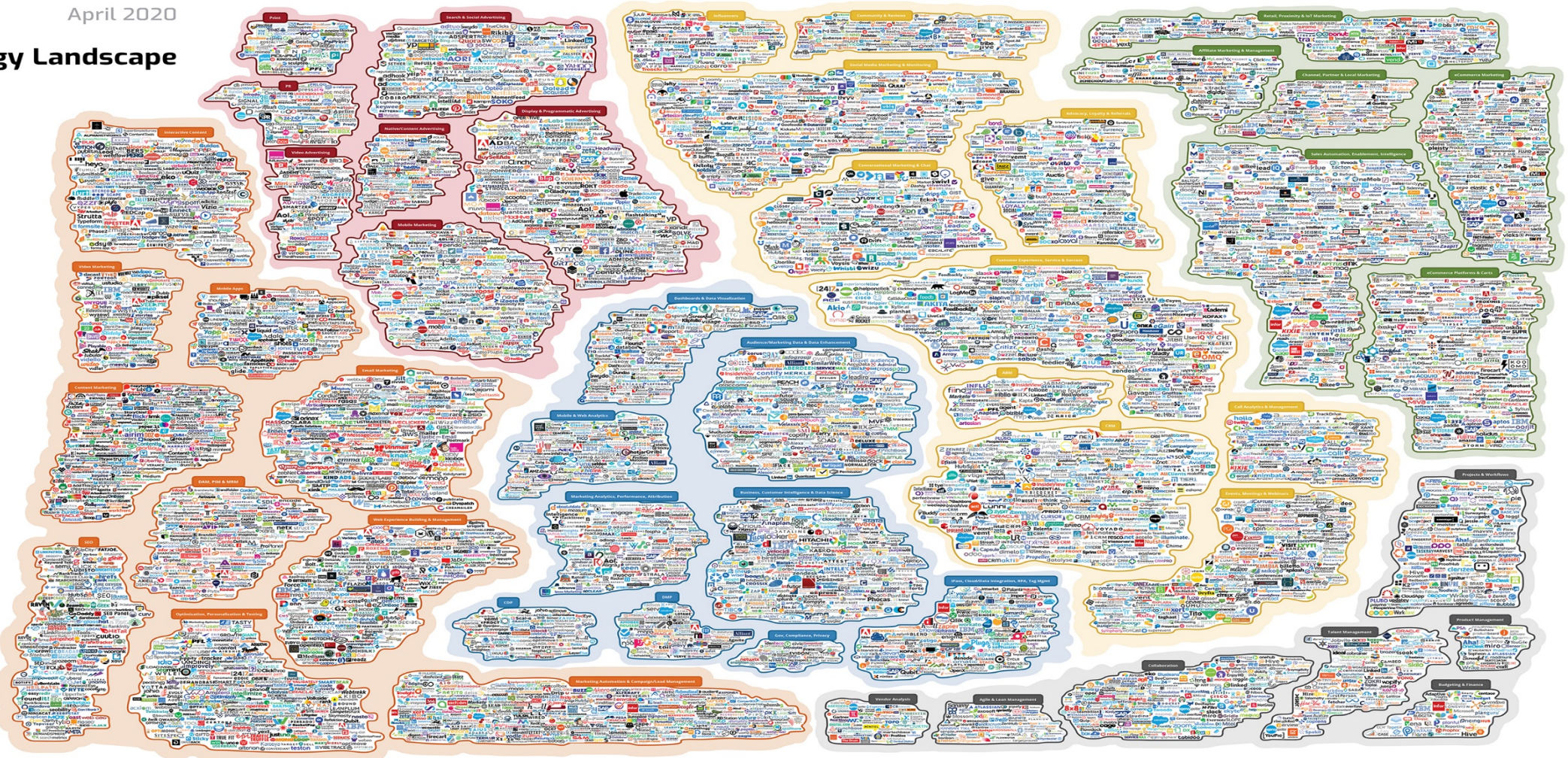
Aun hay mas...

Marketing Technology Landscape The Martech 5000

Total Solutions	8,000
Advertising & Promotion	922
Content & Experience	1,936
Social & Relationships	1,969
Commerce & Sales	1,314
Data	1,258
Management	601

Access all the data of this landscape & more at martech5000.com

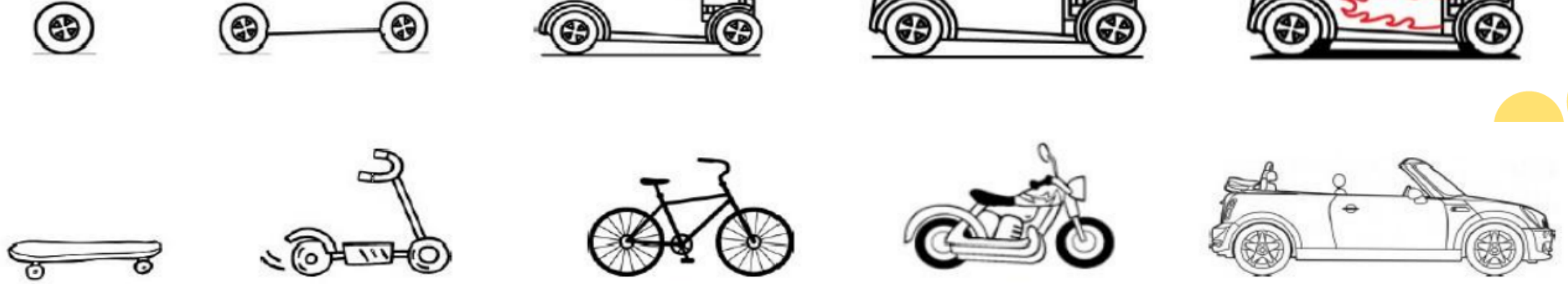
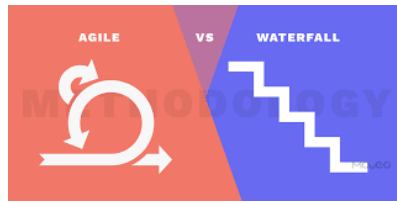
2019	7,040 solutions
2018	6,829 solutions
2017	5,381 solutions
2016	3,874 solutions
2015	1,876 solutions
2014	947 solutions



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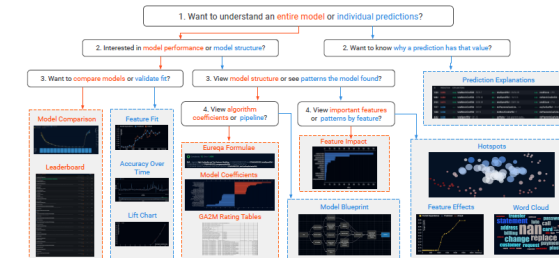
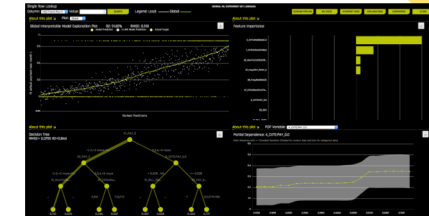
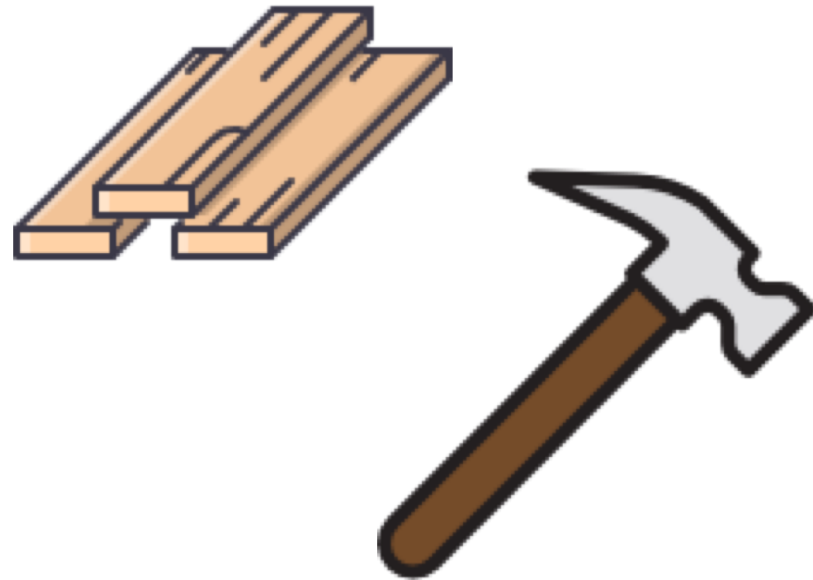
Produced by Scott Brinker (@chiefmartec) and Blue Green Brands (@bluegreenbrands).

CULTURA AGIL?

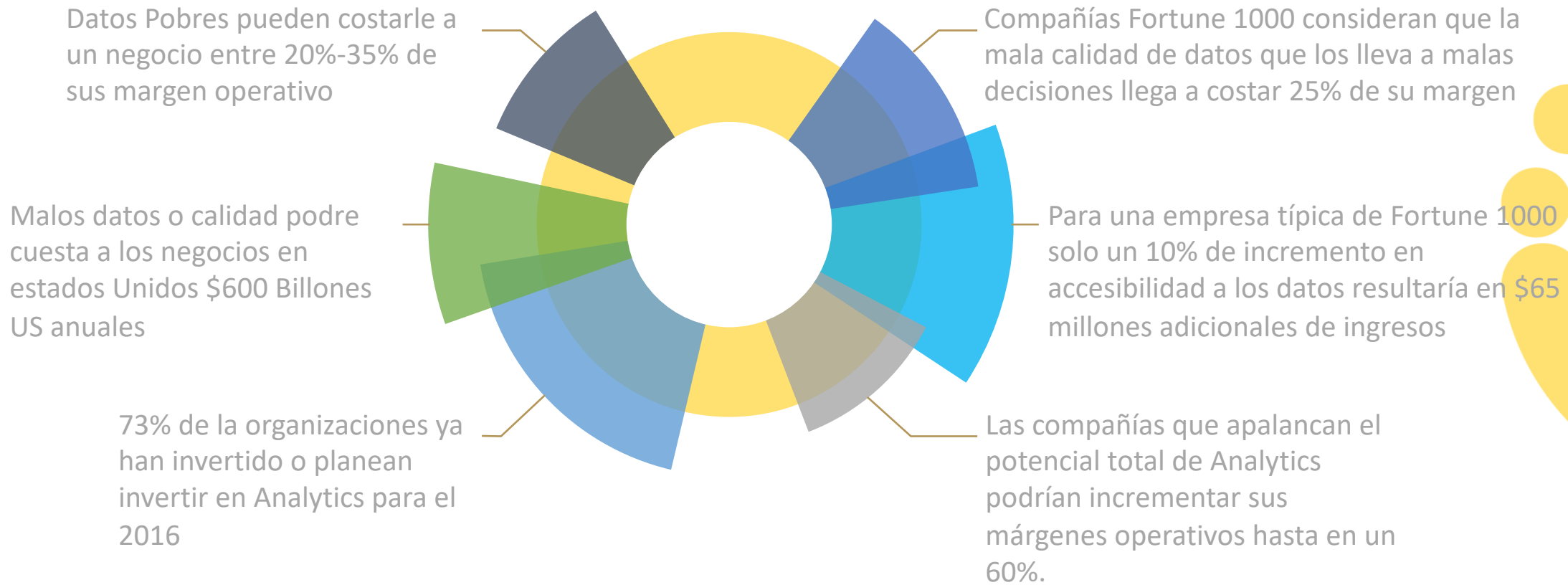


Comprar vs Construir?

```
databricks Applying Convolutional Neural Networks with TensorFlow python  
# calculate loss  
cross_entropy = tf.reduce_mean(tf.nn.softmax_cross_entropy_with_logits(labels=y_, logits=conv))  
# Activation Function: the ReLU-like Softmax  
train_step = tf.train.AdamOptimizer(1e-3).minimize(cross_entropy)  
train_step = tf.train.AdamOptimizer(1e-3).minimize(cross_entropy)  
# Calculate accuracy  
correct_prediction = tf.equal(tf.argmax(conv, 1), tf.argmax(y_, 1))  
accuracy = tf.reduce_mean(tf.cast(correct_prediction, tf.float32))  
# Launch the model  
sess = tf.InteractiveSession()  
# Initialize the variables  
tf.global_variables_initializer().run()  
# By default, should have the range go to 10,000  
with tf.device('/device:GPU:0'):  
for i in range(10000):  
    batch = next(train_data_batch())  
    if i % 100 == 0:  
        train_accuracy = accuracy.eval(feed_dict={batch[0], y_[batch[0]], keep_prob: 1.0})  
        print('step %d, training accuracy %g' % (i, train_accuracy))  
    train_step.run(feed_dict={batch[0], y_[batch[0]], keep_prob: 0.5})  
# Save the model  
saver = tf.train.Saver()  
saver.save(sess, 'model.ckpt')  
# Future major versions of TensorFlow will also gradients to flow  
# into the labels input on backward by default.  
# See 'tf.nn.softmax_cross_entropy_with_logits_v2'  
step 0, training accuracy 0.00  
step 100, training accuracy 0.00  
step 200, training accuracy 0.00  
step 300, training accuracy 0.04  
step 400, training accuracy 0.00  
step 500, training accuracy 0.00  
step 600, training accuracy 0.00  
step 700, training accuracy 0.00  
step 800, training accuracy 0.00  
step 900, training accuracy 0.00  
step 1000, training accuracy 0.00  
step 1100, training accuracy 0.00  
step 1200, training accuracy 0.00
```



Empresas que monetizan Datos



Tipo de Dato



Tabular



Texto



Imagenes

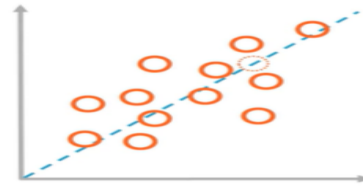


Sonido

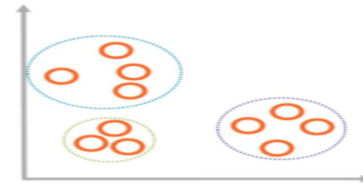
Casos de Uso



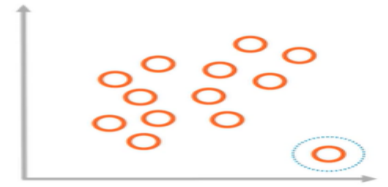
Classification



Regression



Clustering

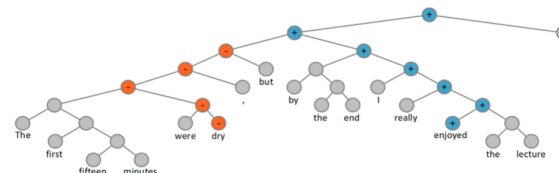


Anomaly detection

Language Translation



Clasificación de Docs



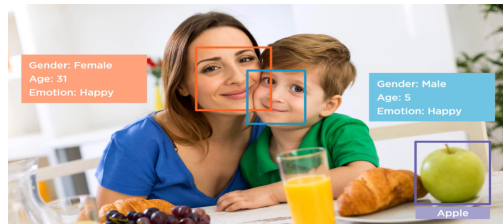
Análisis de sentimiento

Salve,
mi nomen
Matthew Renze.



Hello,
my name is
Matthew Renze.

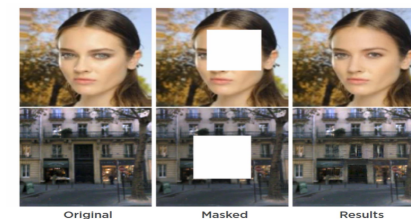
NLP Traducción



Clasificación de Objetos



Self Driving Cars



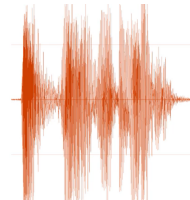
Descifrar Imagenes



Modificaciones



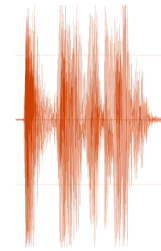
Clasificación de sonido



Hello,
my name is
Matthew Renze

Speech 2 text

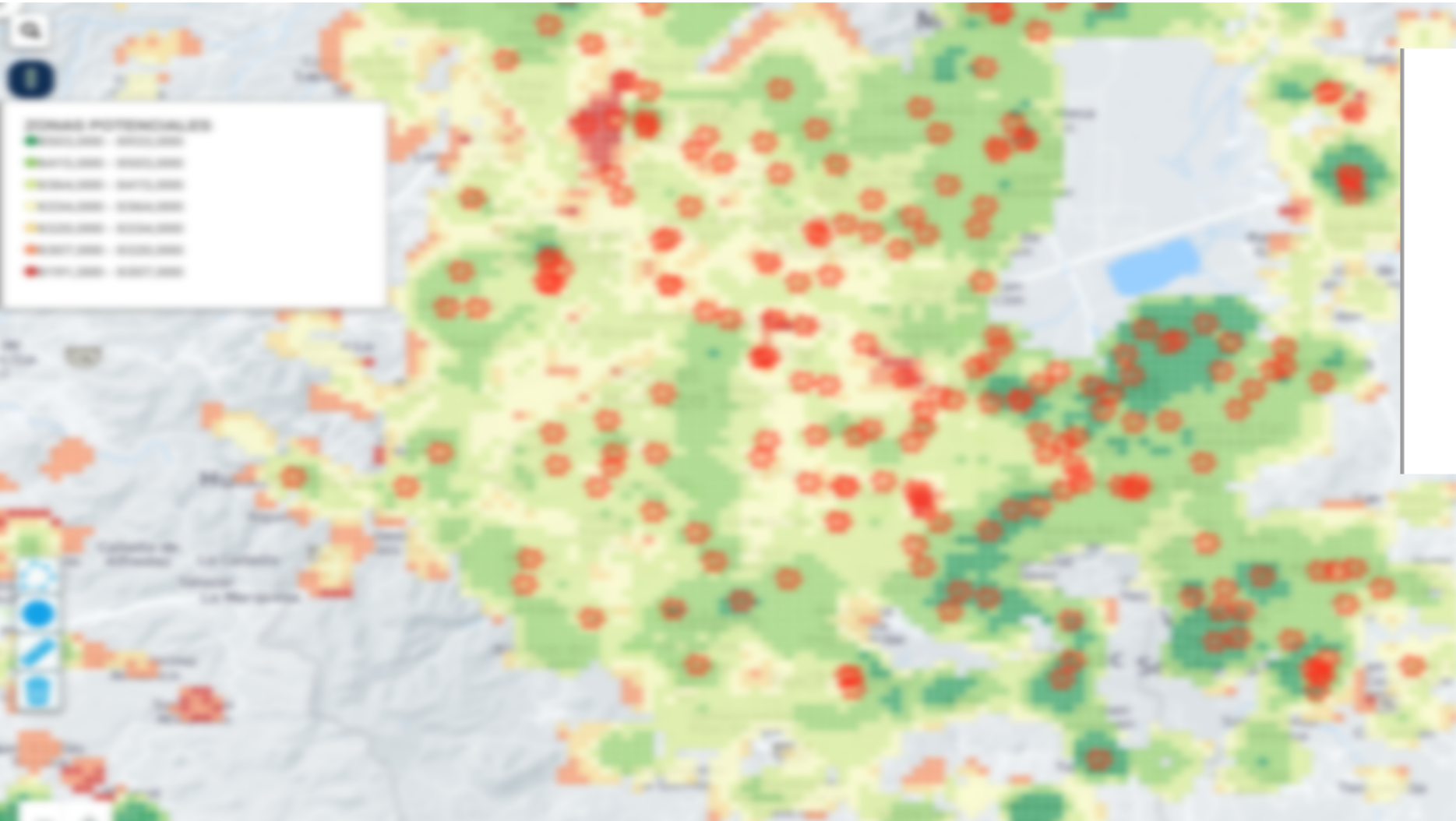
Hello,
my name is
Matthew Renze



Text 2 Speech



Video 2 Speech



ZONAS POTENCIALES

- \$503,000 - \$933,000
- \$415,000 - \$503,000
- \$364,000 - \$415,000
- \$334,000 - \$364,000
- \$320,000 - \$334,000
- \$307,000 - \$320,000
- \$191,000 - \$307,000

Automatización
Fidelización
Eficiencia y eficacias operativas
Ahorros
Evitar posibles perdidas
Competitividad
Etc...