



Beyond the buzz

Start your emerging technology preparedness

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AFPSD Treasury Symposium
September 13, 2018

Together we'll go far





1876

Western Union turns down Alexander Graham Bell's offer to sell his invention...

the telephone



1979

Ross Perot walks away from a \$50MM deal to purchase a little company from Bill Gates...

Microsoft



1999

Excite.com passes on buying a search engine for the bargain price of \$750k, that search engine was...

GOOGLE



2000

Blockbuster decided that \$50MM is not a price they are comfortable with to purchase...

NETFLIX

Where is your daily focus?



How do you digest new technology?

Your kids?



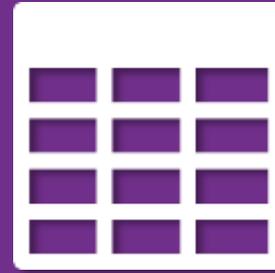
The media?



Leave it to IT?



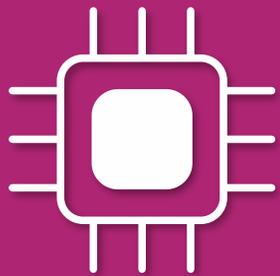
Wait for a bank solution?



Big data



**Internet
of things**



**Artificial
intelligence**



**DLT and
blockchain**

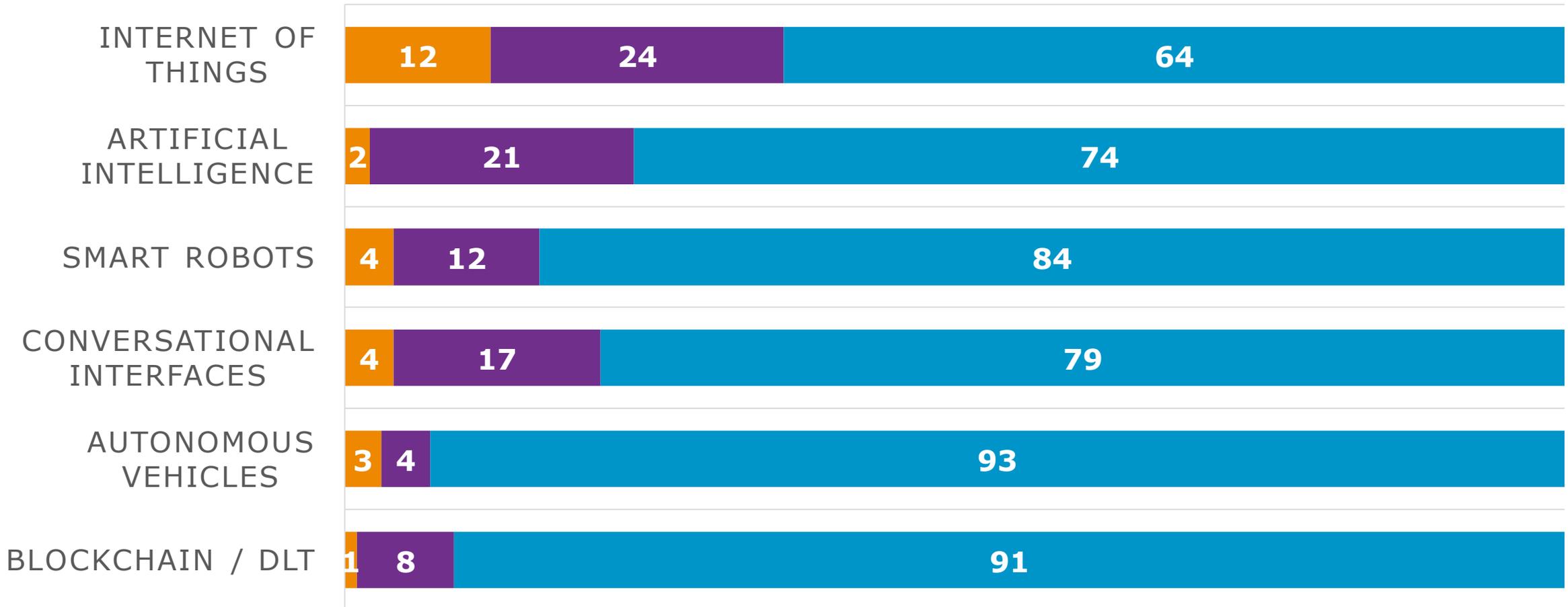


APIs

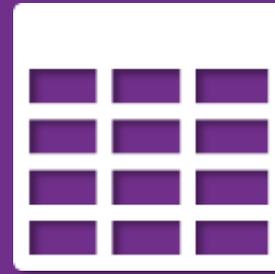
Modest adoption across all industries

plans for emerging technologies, 2018

invested and deployed planning and experimenting other



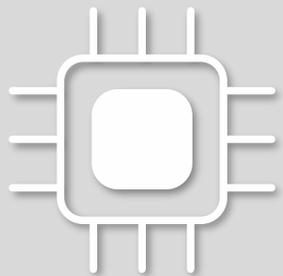
n = 3,138.
Source: Gartner, Inc.



Big data



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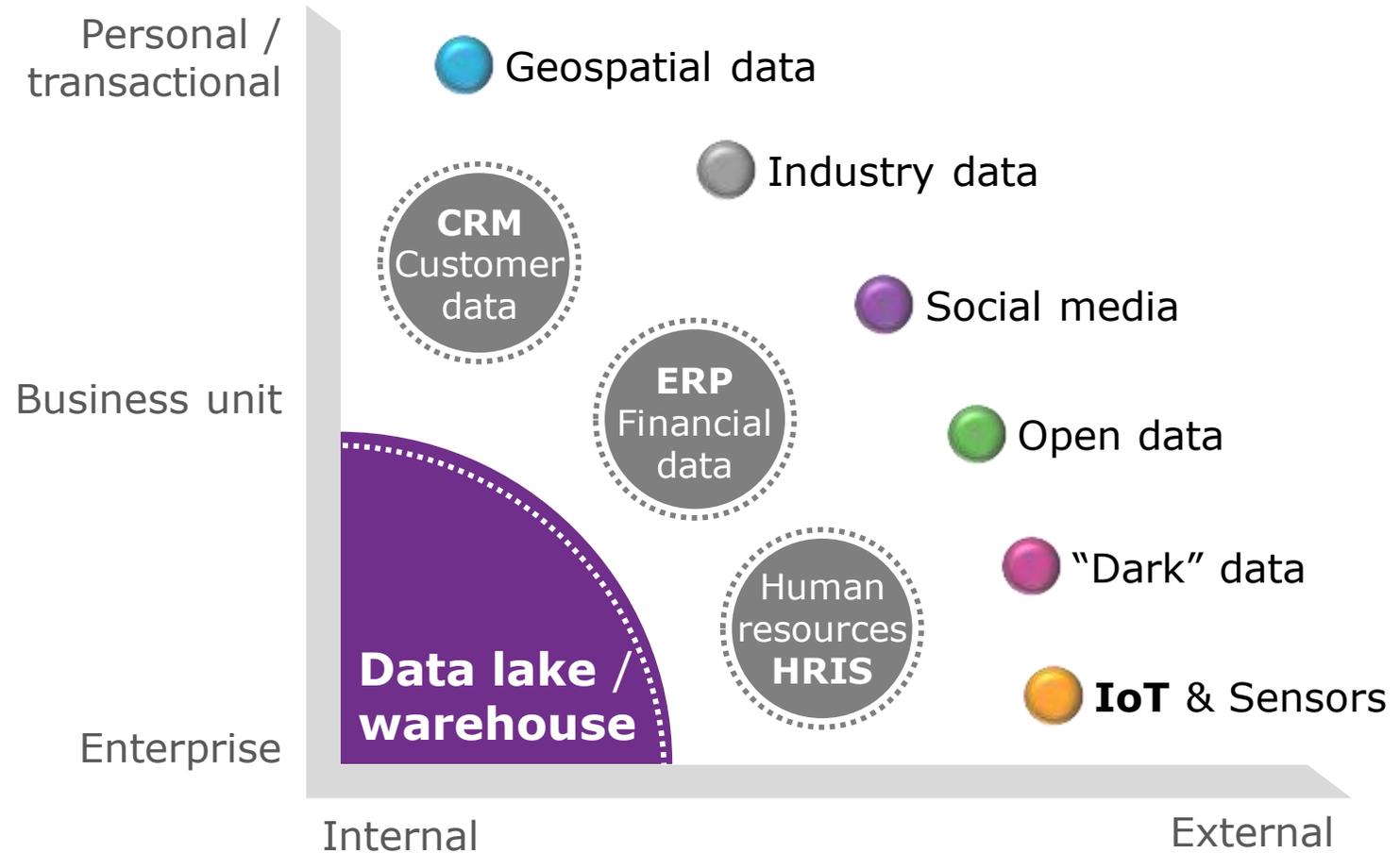
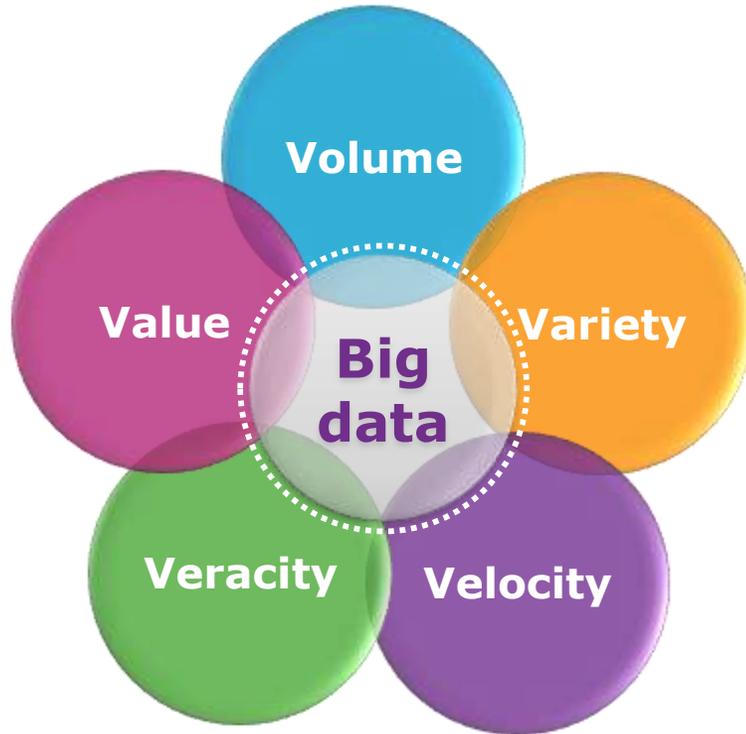


**DLT and
blockchain**



APIs

Big data



An **accumulation of data** that is too large and complex for processing by traditional database management tools

The IoT buzz

The number of connected devices is expected to exceed **75** billion by 2025

IoT connected devices in billions

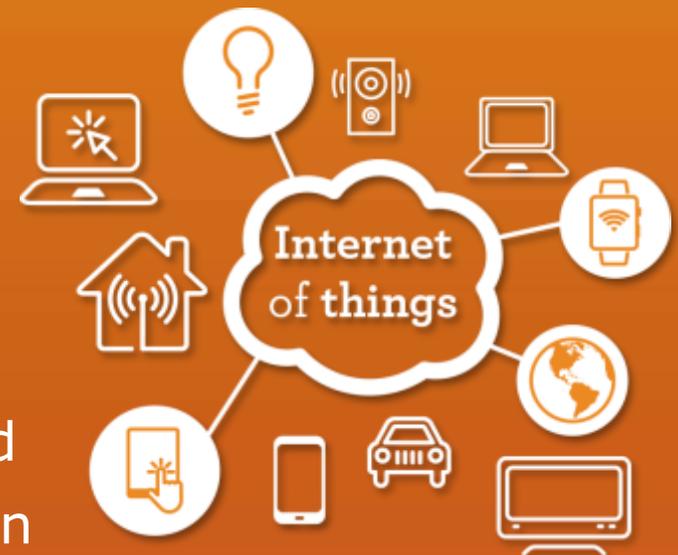


In 2008 the number of IoT devices surpassed the world population

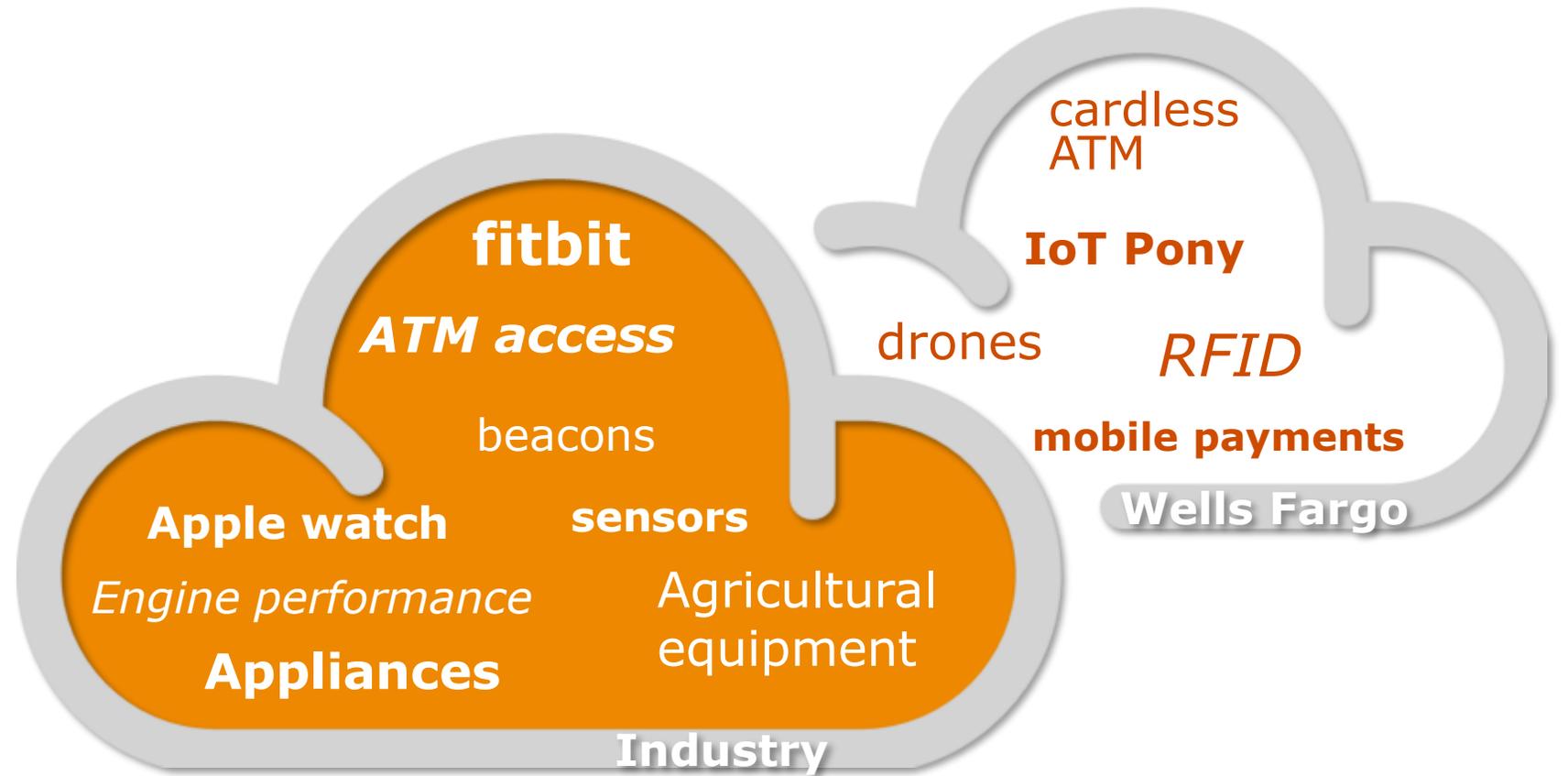


Modern cars have over 100 sensors that create 25 gigabytes of data per hour

By 2020 with 31 billion devices connected, this would equate to an average of **4** IoT connected devices per person



IoT use cases



The big data buzz



in an average minute...

900,000 people login to **Facebook**

450,000 **tweets** are posted

4.7 MM **YouTube** videos are viewed

with numbers like this, it's no surprise we are **doubling** the amount of data globally every 2 years

more than



of average company's volume of data grows over **50%** per year



average number of unique data sources that companies use for analysis



Fuel for the AI engine

Beyond the big data buzz

1

Big data is **not just** for big companies

2

Clean up the swamp or your AI will suffer

3

The data lake: swimming, treading, or under water?

4

Focus has been on customer insight and business process

5

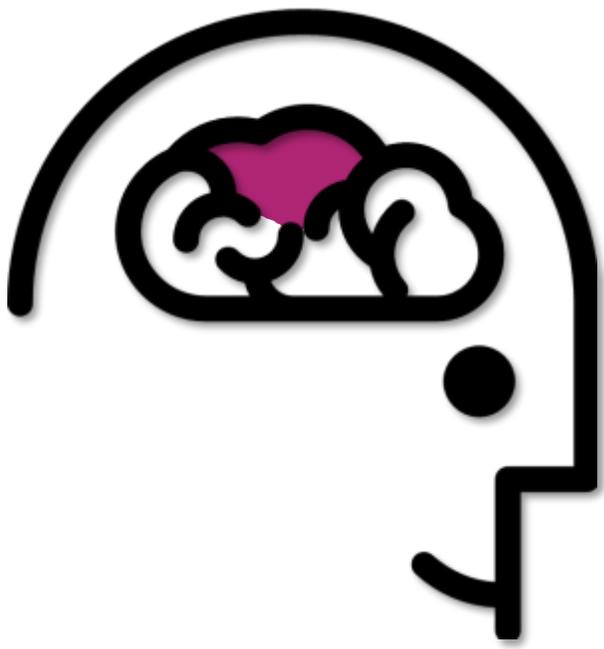
Wanted: Resources to manage and use data analytics

6

Ready to hire a treasury or finance data **scientist**?

Big data use cases

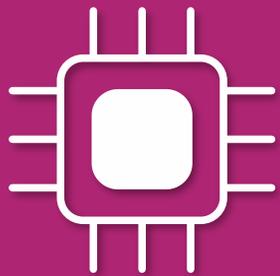




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APIs

AI | Artificial intelligence

Natural Language Processing



Robotic process automation
RPA



Text analytics



Chatbots or virtual assistants



Machine learning



Deep learning

AI is the **simulation of human intelligence** by machines

The AI buzz

Global spending is expected to expand from **\$12B** in 2017 to **\$57B** in 2021



“Master of Go Board Game is walloped by GOOGLE computer program.”

- *New York Times*, 2016

Rapper Common evangelizing AI for Microsoft in TV ad



Alexa, Siri, Cortana battle for virtual assistant supremacy

Machines



to replace or co-work with humans

RPA cost reductions of
35-65% for onshore operations
10-30% for offshore operations

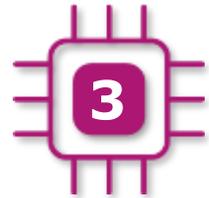
Beyond the AI buzz



Platforms are **cheaper** and **easier** to use



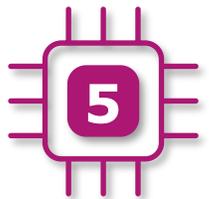
Chatbots rising for customer service



Gmail, LinkedIn: **predictive email responses**

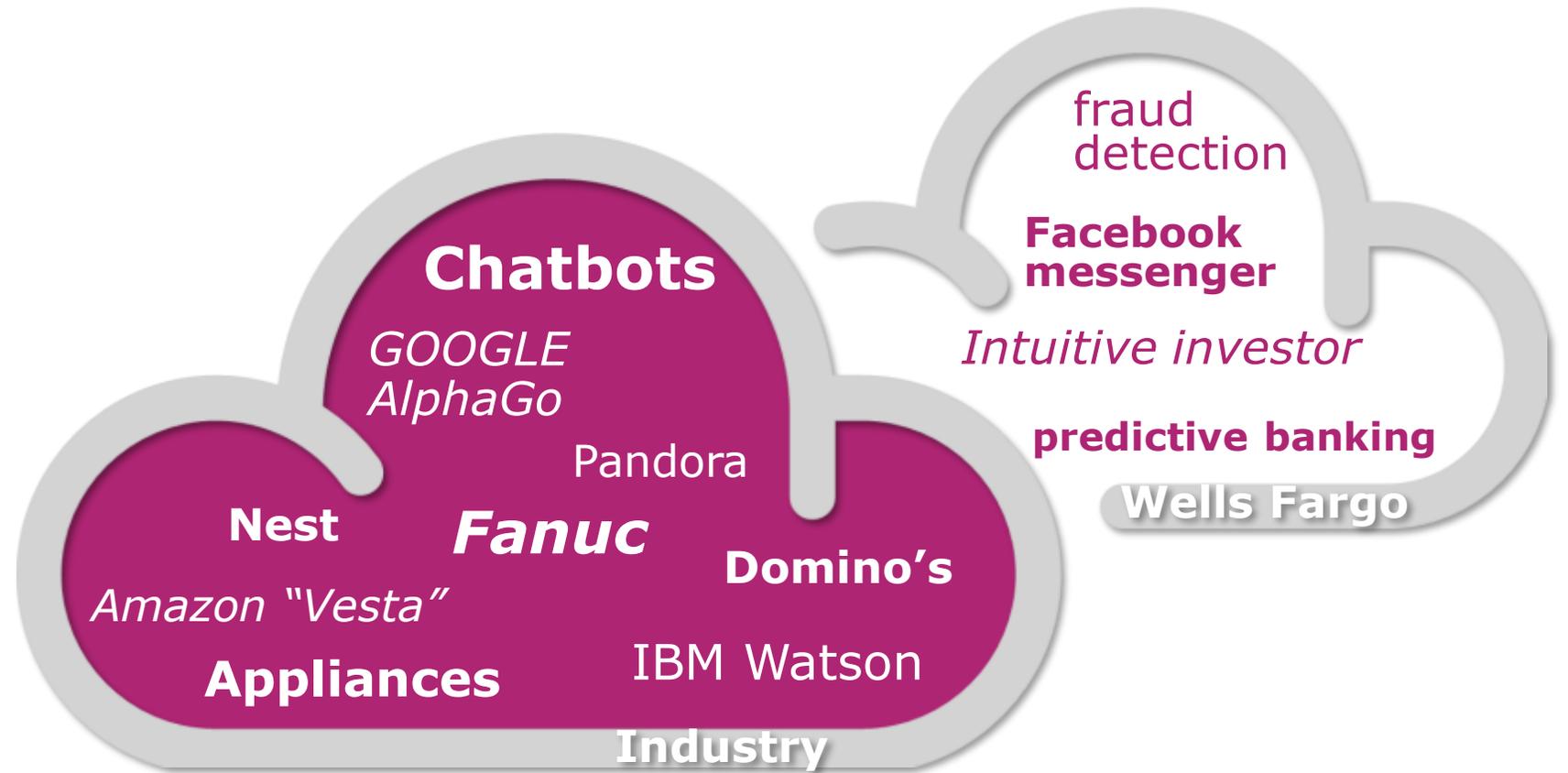


Range and nuance of emotional intelligence is too vast



Will Siri, Alexa, and Cortana compete on personality?

AI use cases

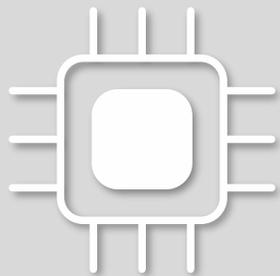




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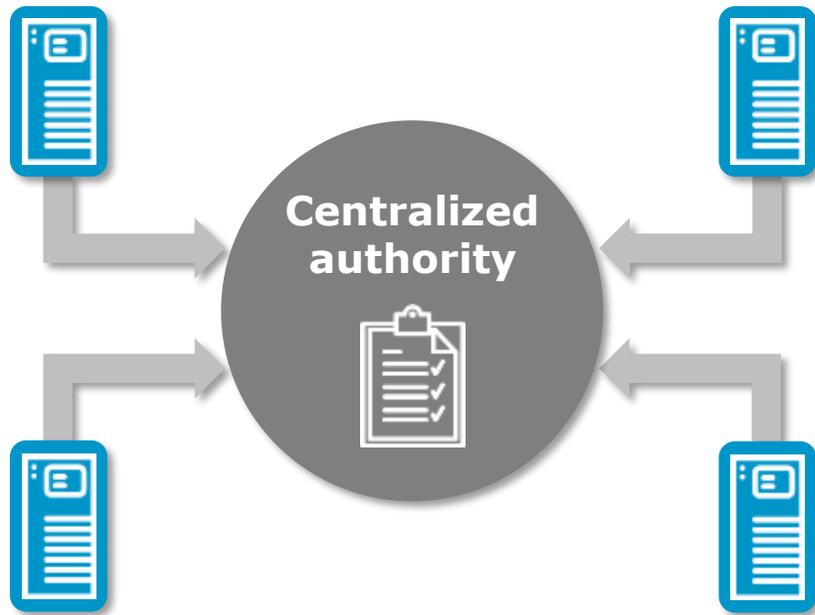
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blockchain**



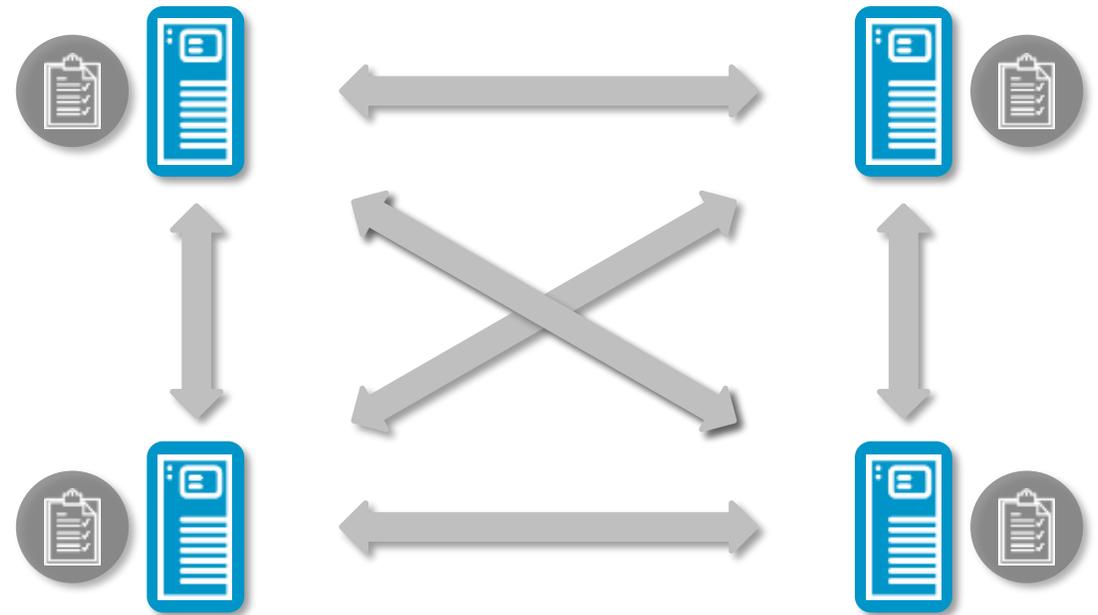
APIs

DLT | Distributed Ledger Technology

Centralized ledger



Distributed ledger



A decentralized record-keeping solution that is **encrypted**, digitally **synched** and **shared** across the network

The DLT buzz

bitcoin



blockchain

“Bitcoin is a technological tour de force.”

– Bill Gates, Microsoft co-founder

“Stay away from it. It’s a mirage, basically”

– Warren Buffet, CEO of Berkshire Hathaway

“It’s gold for nerds.”

–Stephen Colbert, Comedian

\$20B

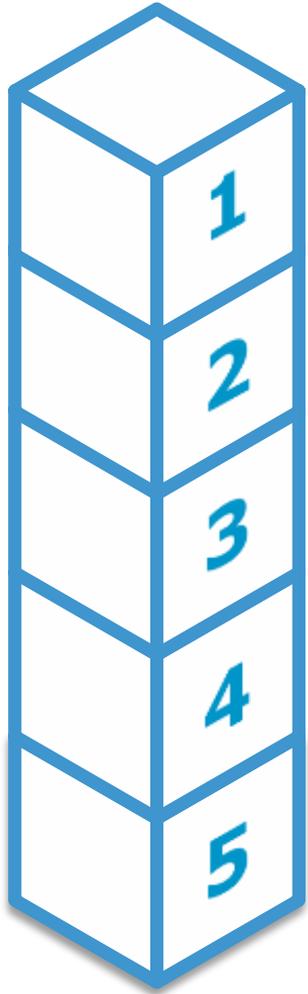
global blockchain
technology market by 2024



EARLY ADOPTORS
FI, Insurance and Healthcare



Beyond the DLT buzz



Blockchain is **not always needed**

40% of blockchain projects originate in the U.S.

90% of blockchain trials go nowhere

Main street adoption is **3-5 years** out

Challenges yet to overcome
Standards, regulations, legal, governance

DLT and blockchain use cases

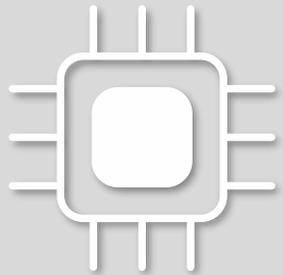




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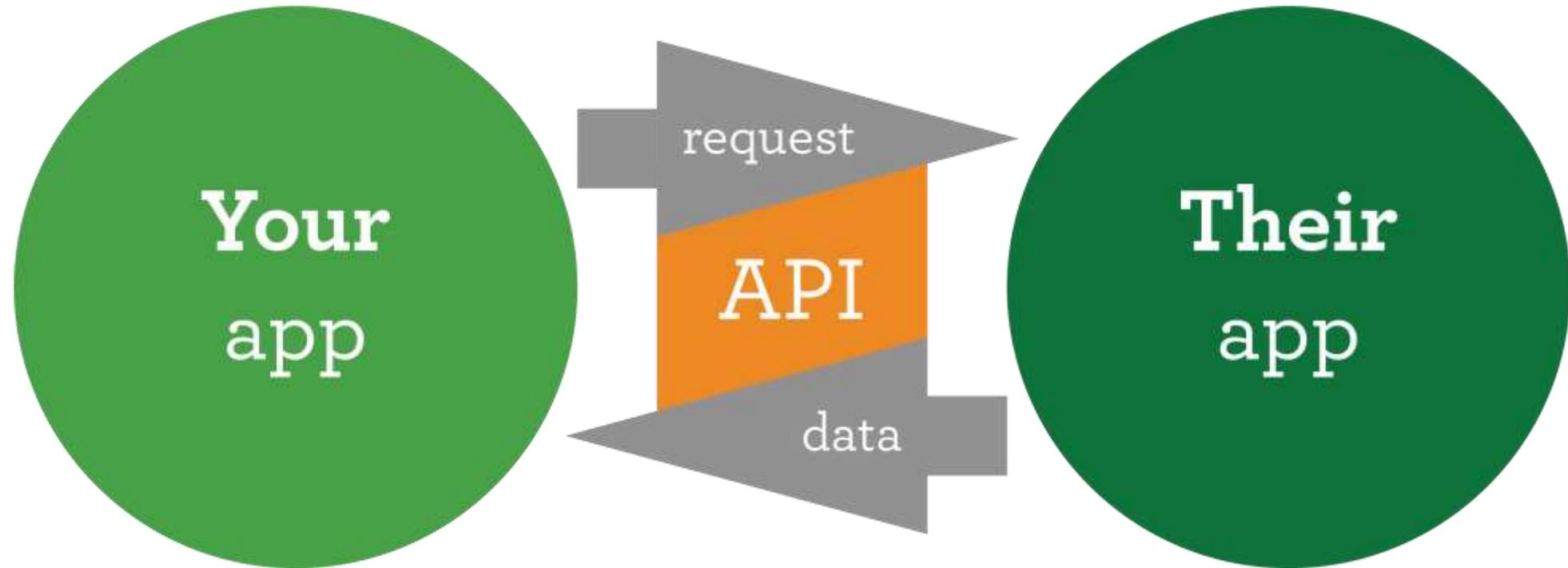


**DLT and
blockchain**



APIs

API | Application Program Interface



Allows one software application to **connect** to another using a common language to **perform a task** or **exchange data**

The API buzz

\$**6.5**B acquisition
of **Mulesoft** by **Salesforce**



The merger will help Salesforce users unite data across different cloud products

Digital mash-ups

create joint value propositions for business partners' common customers

"APIs are the invisible hand behind the IoT."

- Jennifer Riggins, Nordic APIs

APIs are a
catalyst for **innovation**

They can embed services inside other applications where and when those services can be most relevant

Beyond the API buzz

1 

They are **NOT new**

2 

ERPs are creating an “**app store**” for banking

3 

Financial Institutions are **banking on APIs**

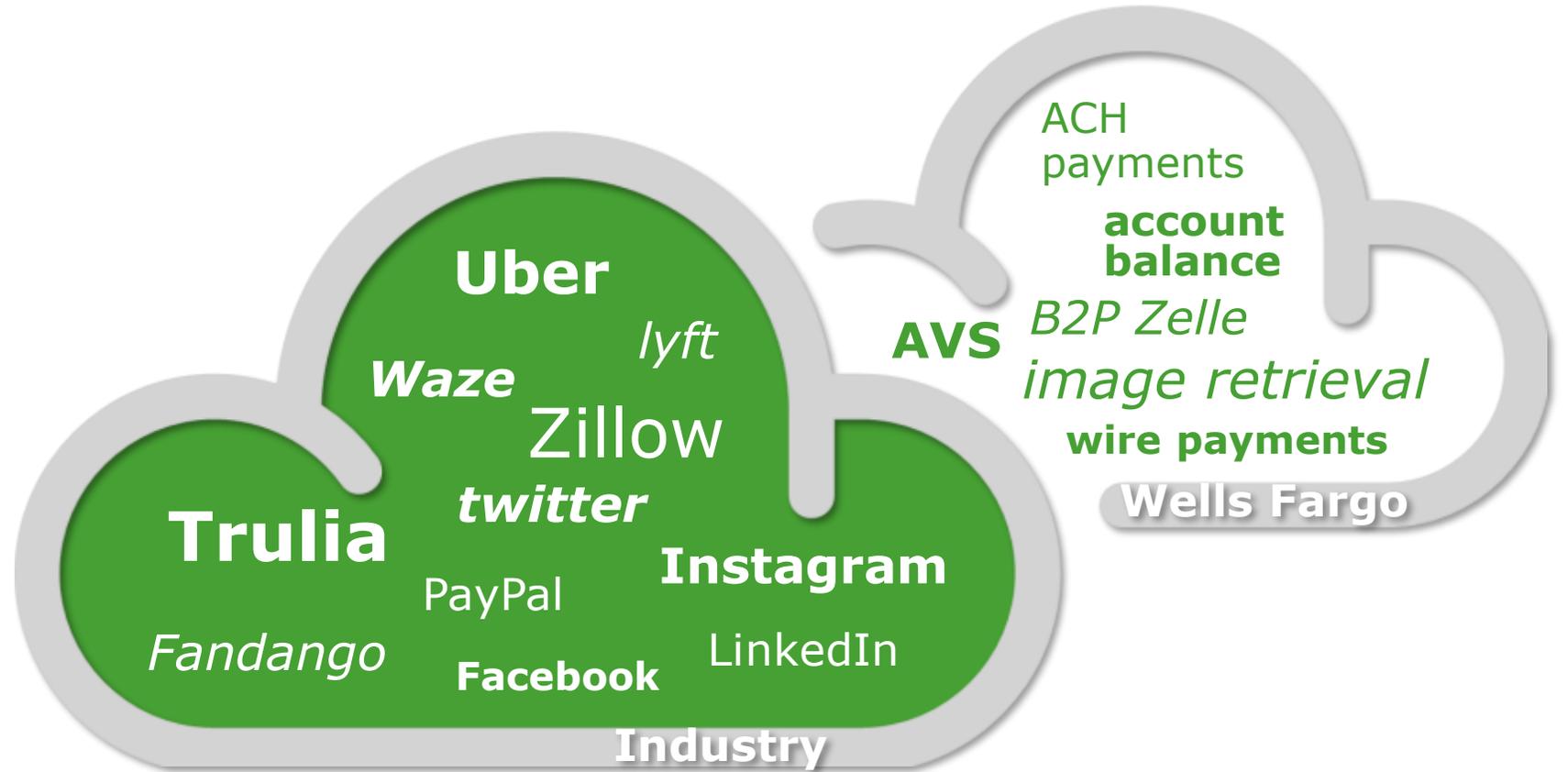
4 

Individual **micro services** that traverse the internet

5 

Developers and an **integration plan** are needed

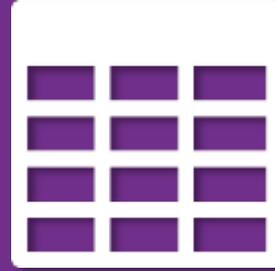
API use cases



How do I control
this buzzing in my
head?



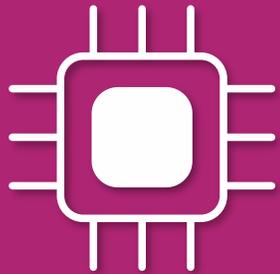
It's all about the
data



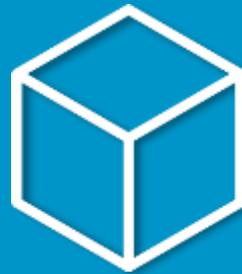
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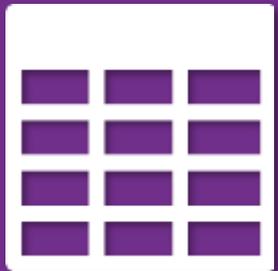


APIs



Evangelize from your seat at the table!

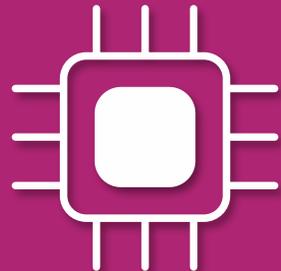
Technology doesn't change your core business,
but helps you change how you run it...
faster...smarter...better



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APIs