



Using AI To Calculate Customer Satisfaction

Start your Machine Learning journey

This Presentation Is Confidential &
Proprietary Information Of Cloudbakers, LLC

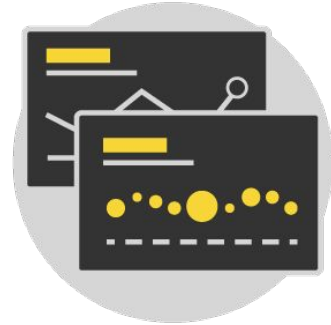
AGENDA

Part I



Background

Part II



Sentiment Analysis



ERIC LANNERT
CTO, CLOUDBAKERS



01

Background



About Cloudbakers



Google Cloud
Partner

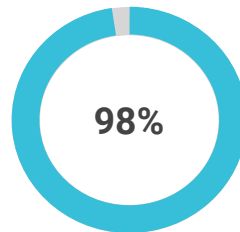
Specialization:

Data Analytics
Application Development

**PREMIER
PARTNER**



**CERTIFIED
TEAM**



**98%+ CLIENT
RETENTION
RATE**



**SOLUTION-
FOCUSED
ORGANIZATION**

02

Sentiment Analysis Our Journey



CUSTOMER SATISFACTION



HOW MANY TRACK IT?

NET PROMOTER SCORE

1. Based on our **customer service**, how likely are you to recommend Acme to a friend or colleague?

	0	1	2	3	4	5	6	7	8	9	10	
Not Likely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Likely

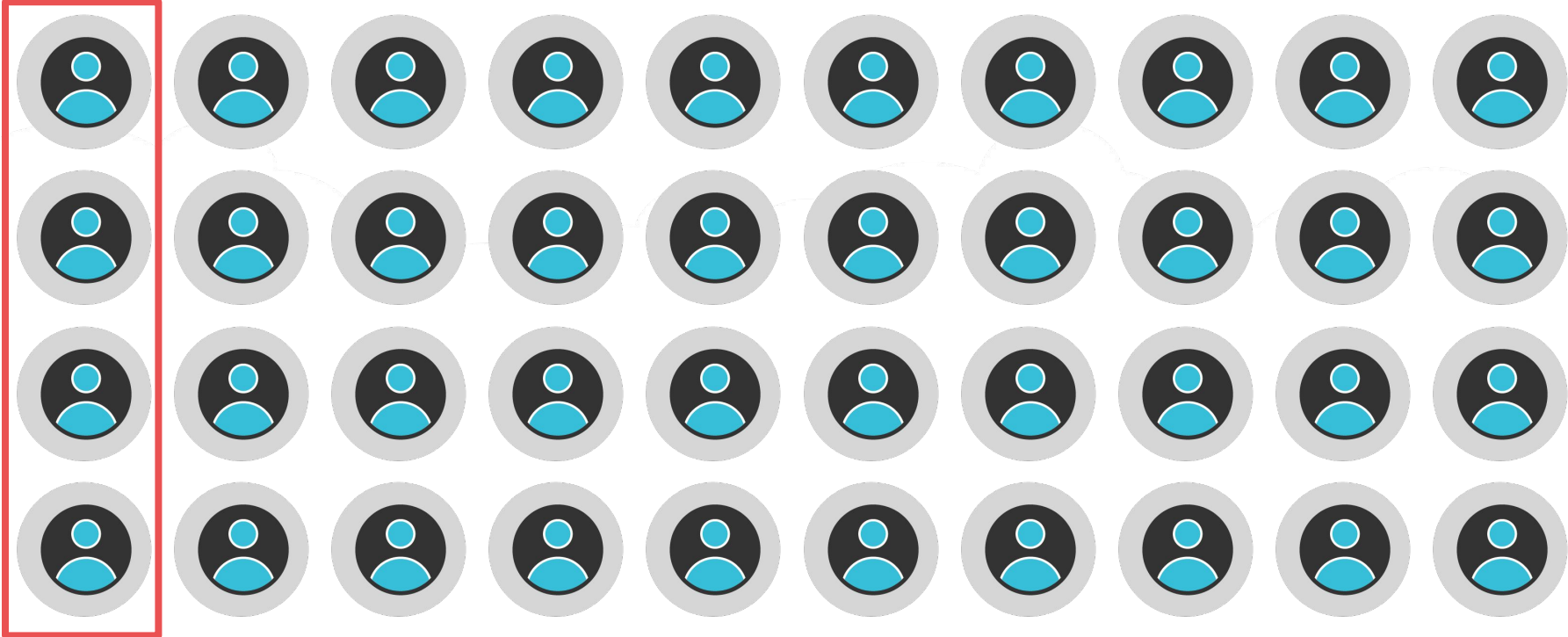
2. Please rate the Support Staff at Acme in the following areas:
Click on the number of stars to rate each item - 5 stars is best!

	Rating
Promptness	★ ★ ★ ★ ★
Courtesy	★ ★ ★ ★ ★
Expertise	★ ★ ★ ★ ★
Enthusiasm	★ ★ ★ ★ ★

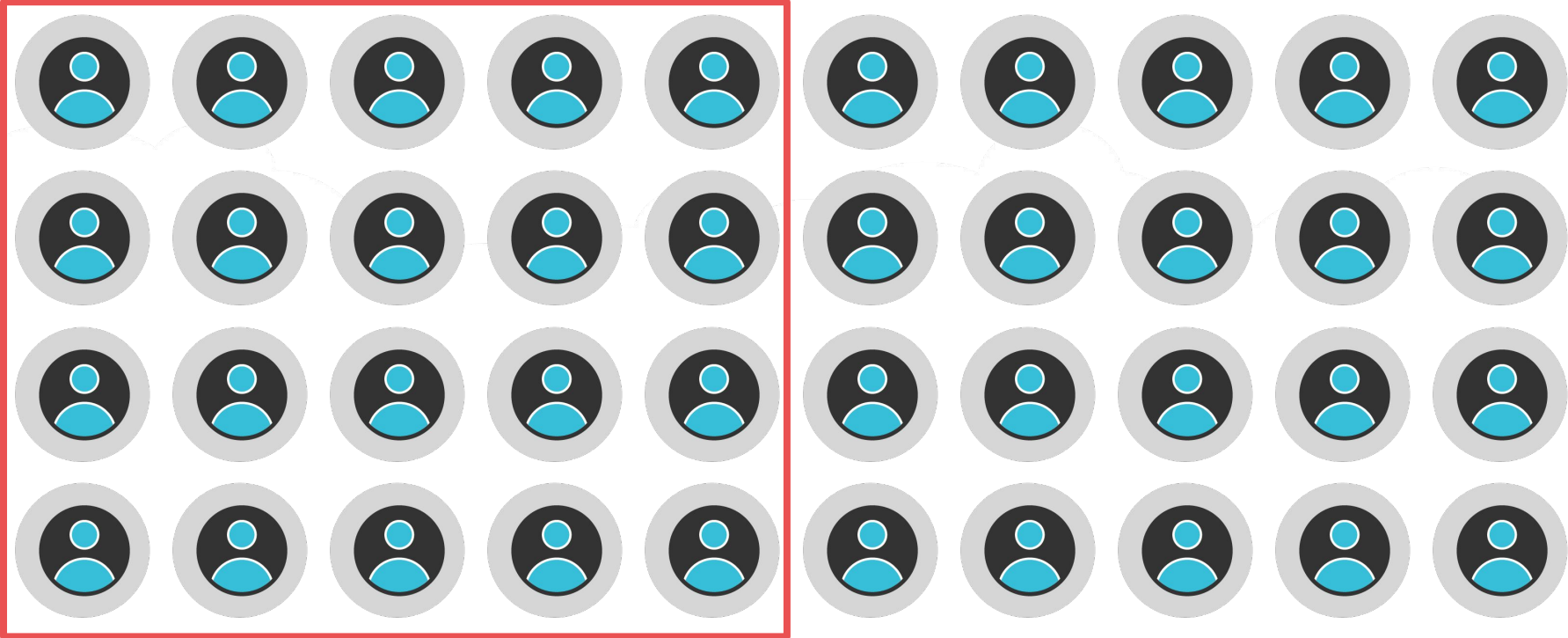
3. Based on our **software**, how likely are you to recommend Acme to a friend or colleague?

	0	1	2	3	4	5	6	7	8	9	10	
Not likely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very likely

HOW MANY CUSTOMERS ACTUALLY RESPOND?



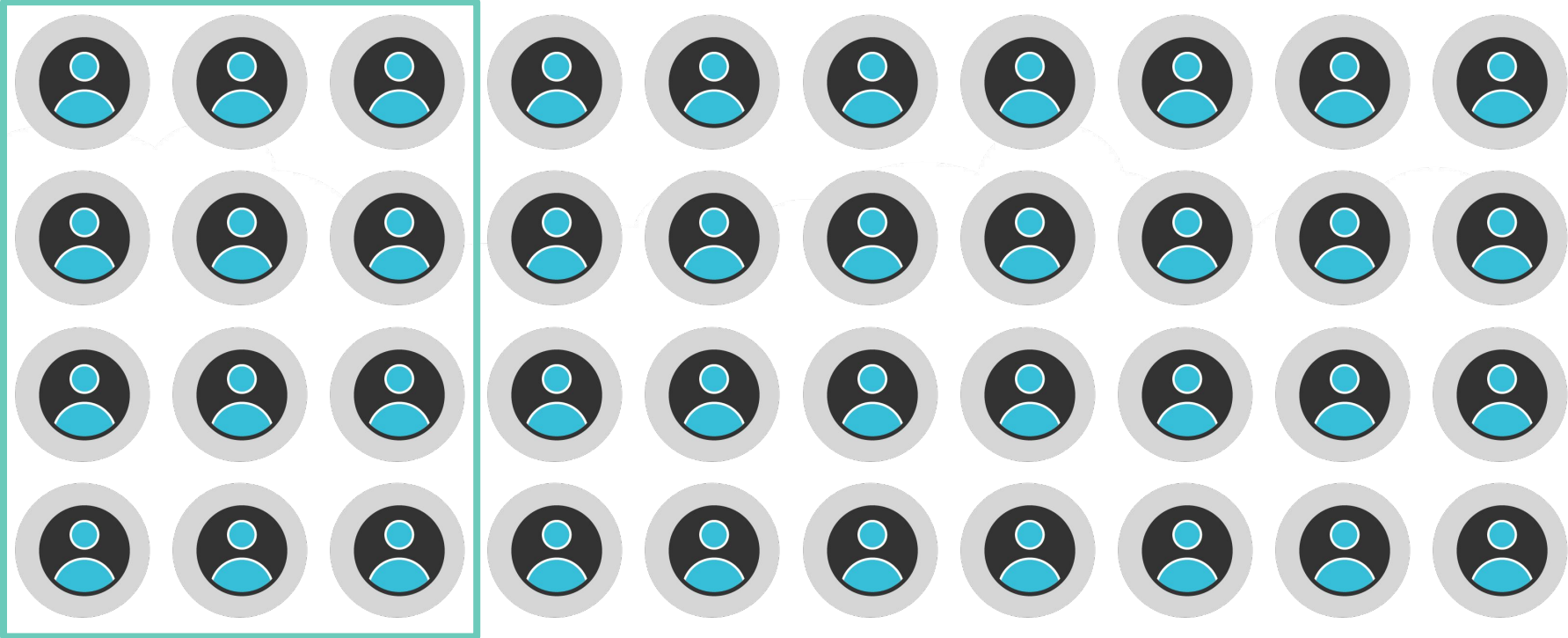
HOW MANY CUSTOMERS ACTUALLY RESPOND?



HOW MANY CUSTOMERS ACTUALLY RESPOND?



HOW MANY CUSTOMERS ACTUALLY RESPOND?



* SurveyAnyplace, 2019



QUESTION:

Can we use the natural language API sentiment analysis on our help desk tickets to gain insight on how are customers are feeling?

TRY THE API

<https://cloud.google.com/natural-language/>

Try the API

Google, headquartered in Mountain View, unveiled the new Android phone at the Consumer Electronic Show. Sundar Pichai said in his keynote that users love their new Android phones.

ANALYZE

[See supported languages](#)

Entity Level Sentiment

Score Range

-1.0 — -0.25

-0.25 — 0.25

0.25 — 1.0

1. Google

ORGANIZATION

Sentiment: Score 0 Magnitude 0

2. users

PERSON

Sentiment: Score 0.4 Magnitude 0.9

3. phone

CONSUMER GOOD

Sentiment: Score 0 Magnitude 0

4. Android

CONSUMER GOOD

Sentiment: Score 0.1 Magnitude 0.2

5. Sundar Pichai

PERSON

Sentiment: Score 0 Magnitude 0.1

6. Mountain View

LOCATION

Sentiment: Score 0 Magnitude 0

7. Consumer Electroni...

EVENT

Sentiment: Score 0 Magnitude 0

8. phones

CONSUMER GOOD

Sentiment: Score 0.7 Magnitude 0.7

9. keynote

OTHER

Sentiment: Score 0 Magnitude 0



Test from our
service desk:

Try the API

Can we arrange a call to discuss process to import events into Zoho? I'm getting stuck at mapping phase as Zoho requires an event id and I wish to create new events. Event Id is not an option in the field mapping list. Thanks!

ANALYZE



Test from our
service desk:

Try the API

Can we arrange a call to discuss process to import events into Zoho? I'm getting stuck at mapping phase as Zoho requires an event id and I wish to create new events. Event Id is not an option in the field mapping list. Thanks!

ANALYZE

Score Range

-1.0 — -0.25

-0.25 — 0.25

0.25 — 1.0

11. Event Id

Sentiment: Score -0.4 Magnitude 0.4

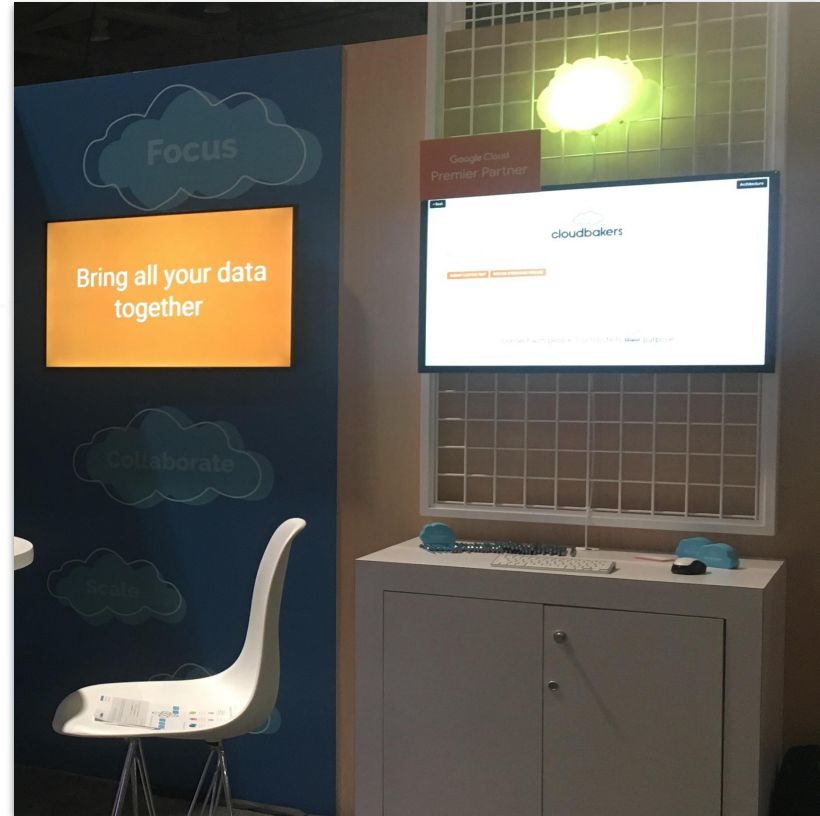


ANSWER:

Let's look at the power of the natural language API sentiment analysis on our help desk tickets...

FIRST ROUND

Conference Test



V1 | OUR ENTITY SCATTERPLOT

Support sentiment

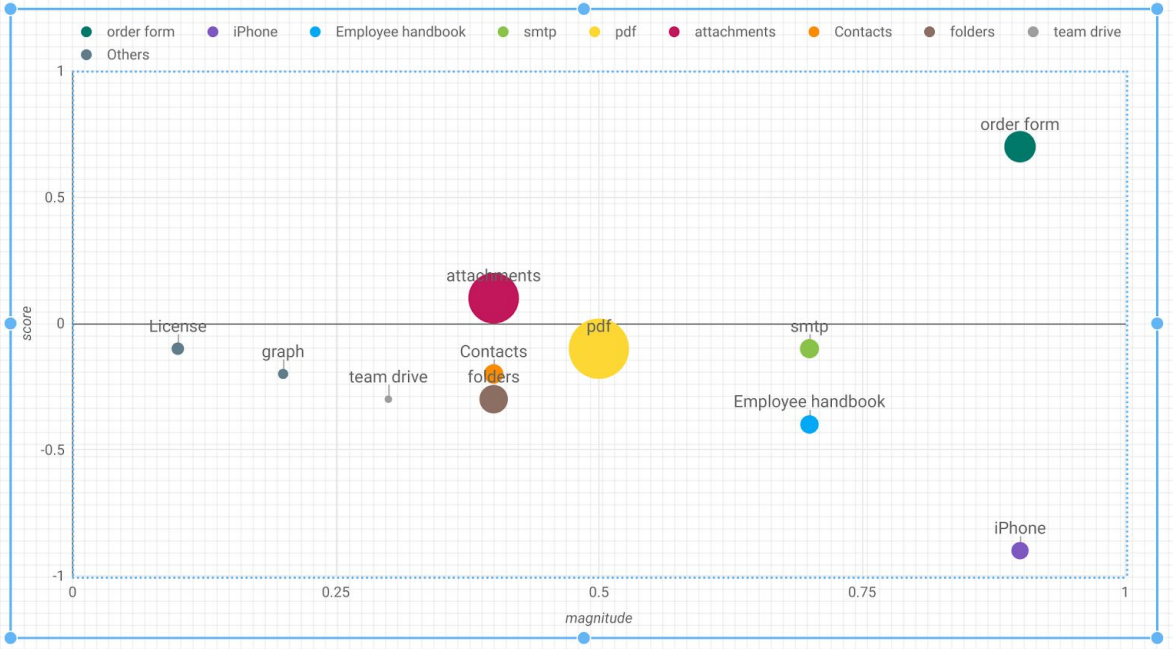
File Edit View Insert Page Arrange Resource Help

<> [Icons] VIEW [Profile]

Page 2 of 8

[Toolbar icons]

[Profile]



Data Source: **Keythemes**

Dimension: **entity**

Metric X: **123 magnitude**

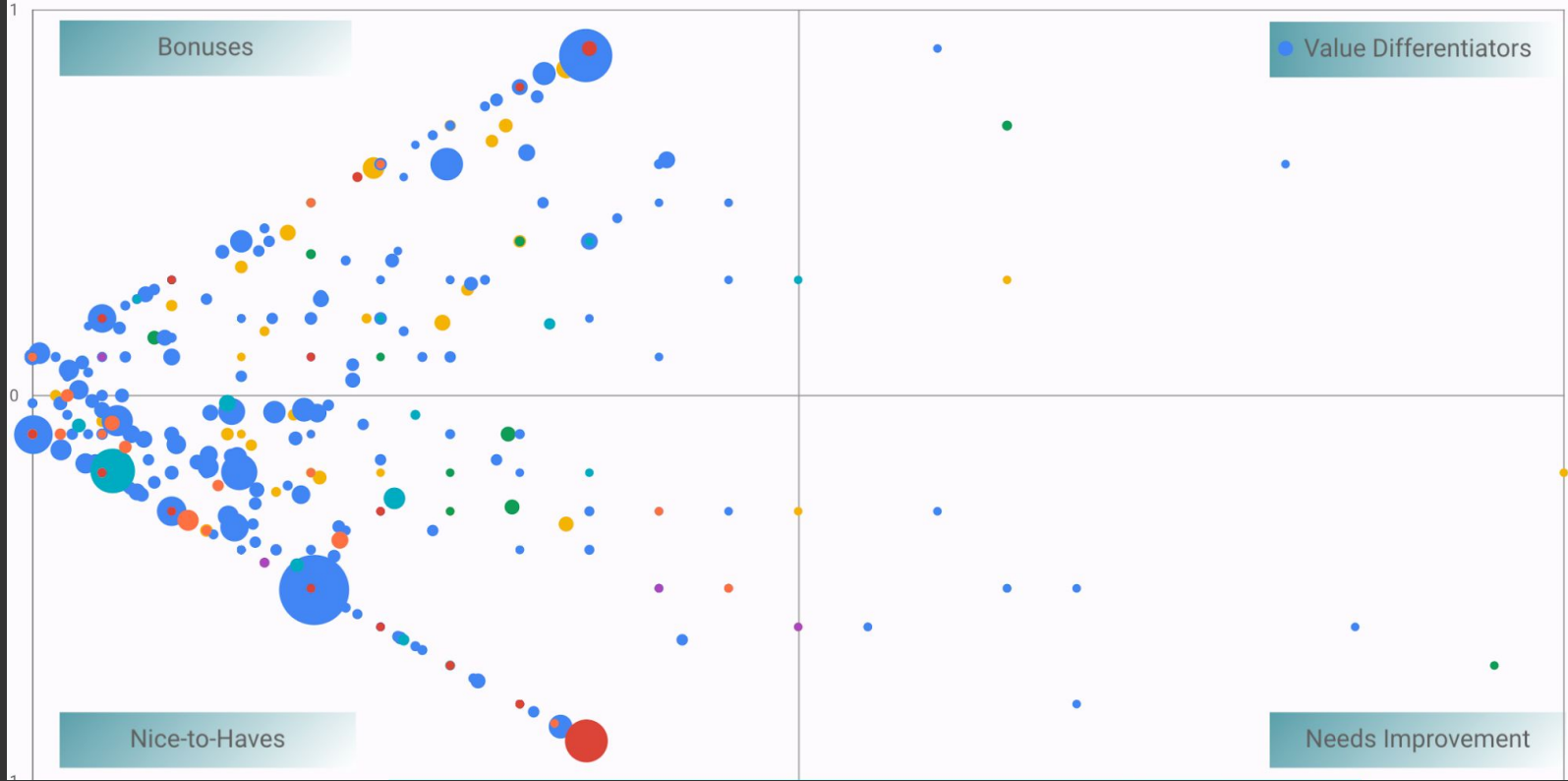
Metric Y: **123 score**

Bubble Size: **123 count**

Sort: **magnitude** Descending

SUPPORT REQUEST ENTITY ANALYSIS

SENTIMENT



- PERSON
- ORGANIZATION
- OTHER
- CONSUMER_GOOD
- LOCATION
- WORK_OF_ART
- EVENT

MAGNITUDE



WE SHARED OUR INSIGHTS WITH OTHERS

Practices



Infrastructure
Modernization



Application
Modernization



Data
Modernization



Productivity &
Collaboration



CRM &
Enablement



Change
& Adoption



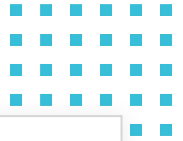
Products

Google Cloud Platform

G Suite



WHICH LED TO A FEW ENHANCEMENTS



Single number on a 1-10 scale, tracked over time to see trends



Drill downs by:
agent
division
customer
& entity



Alerting configured for top tier clients when/if they submit strongly negative tickets

Client Sentiment Dashboard

Jul 18, 2019 - Oct 16, 2019

Company Name

Avg. Sentiment (Lifetime)

4.93

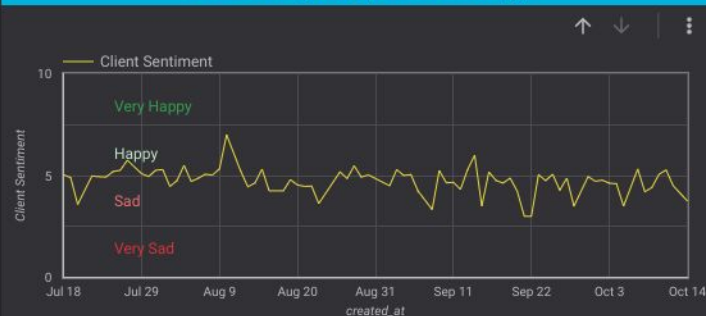
Avg. Sentiment (Specified Date Range)

4.84

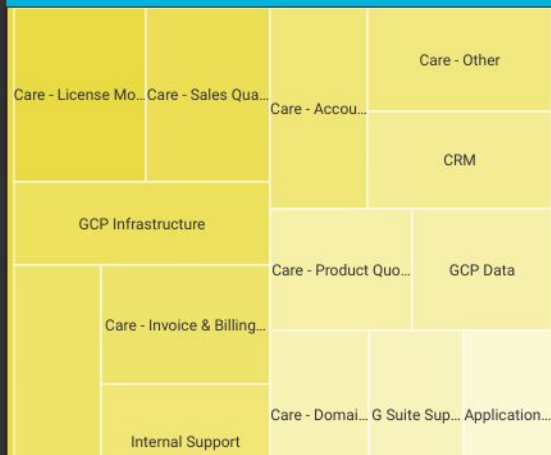
Latest tickets

Tic...	Subject	Created At	Due By	Avg. Sentiment
23055	Google Resource Question	Sep 25, 2019	Oct 14, 2019	4
23454	Lianesthesia.com	Oct 9, 2019	Oct 23, 2019	2.5
23402	google invoice	Oct 7, 2019	Oct 21, 2019	null
22378	Re: Need Assistance (please!)	Aug 30, 2019	Sep 2, 2019	5.5
21472	RE: Follow up	Jul 30, 2019	Aug 8, 2019	null
23547	[Sales Handoff] Magnum Elite Int...	Oct 11, 2019	Oct 22, 2019	5.5
23546	Google analytics	Oct 11, 2019	Oct 22, 2019	null
23540	VFE to AU Migration via Google O...	Oct 11, 2019	Oct 25, 2019	null

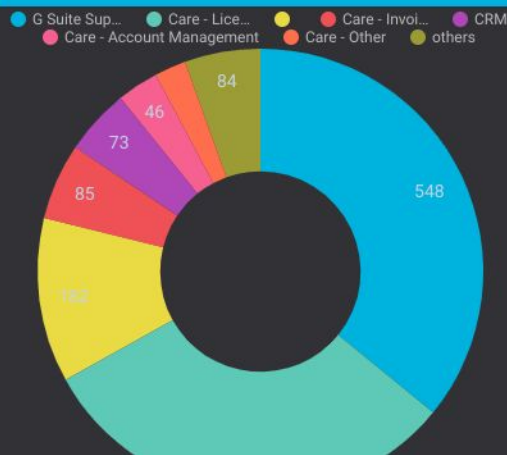
Sentiment Progress (Specified Date Range)



Ticket Sentiment by Groups



Ticket Count by Groups



Most Negative Entities

consequ...	0.5
google vo...	0.5
loading fil...	0.5
mistake	0.5
progress	0.5
deactivati...	0.5
bettercloud	0.5
dispensar...	0.5

Most Positive Entities

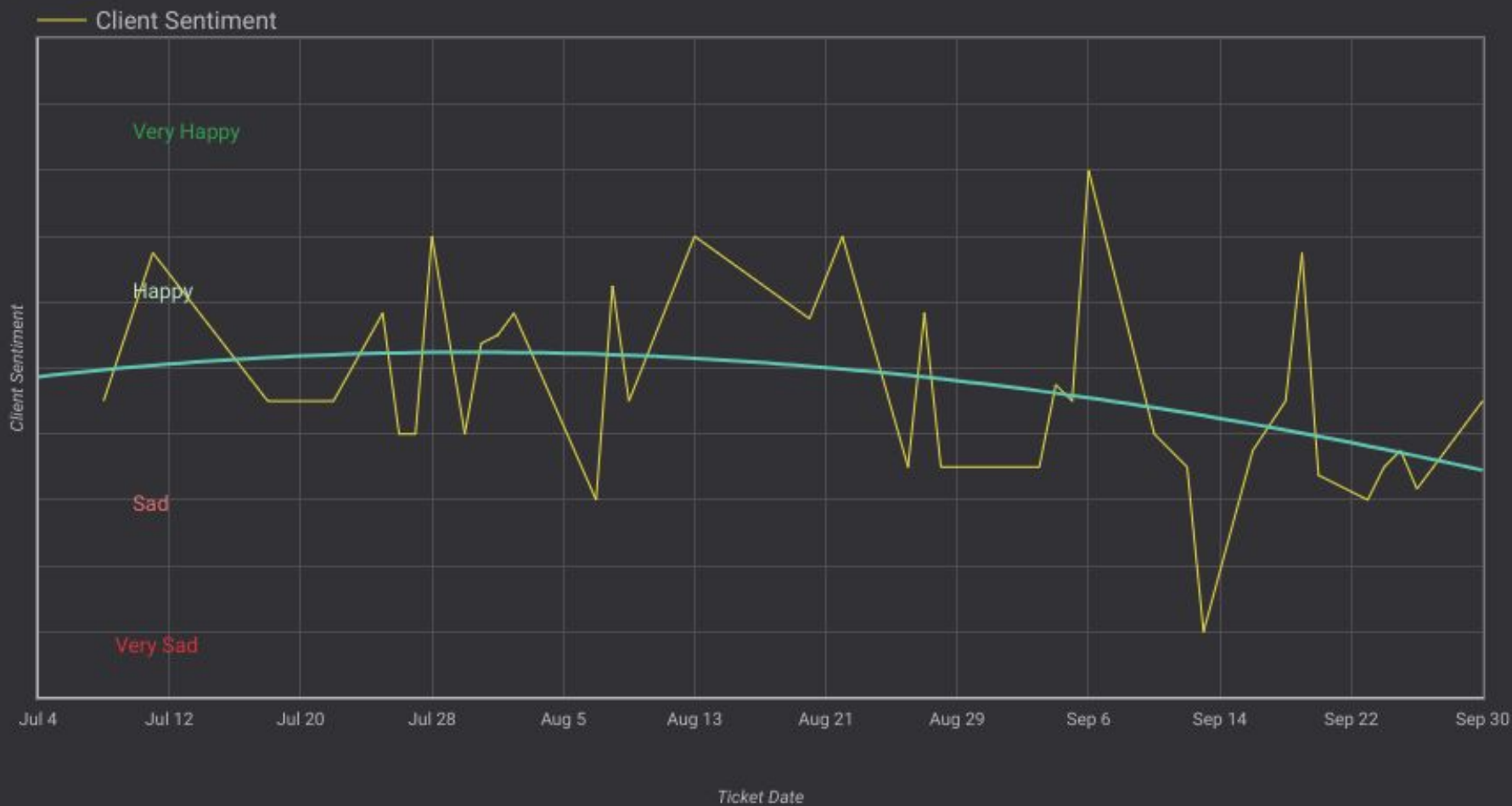
No data












cloudbakers

DASHBOARD

SINGLE SCORE



High Risk Clients

	Client Name	Zoho ID	Last Contact	Avg. Sentim...	Tickets
1.	Client A	424847...	Oct 11, 2019	1 	3
2.	Client B	424847...	Oct 10, 2019	2.6 	13
3.	Client B	424847...	Oct 11, 2019	2.6 	8
4.	Client C	424847...	Oct 3, 2019	2.8 	7
5.	Client D	424847...	Sep 18, 2019	3 	8
6.	Client E	424847...	Oct 11, 2019	3 	4
7.	Client F	null	Oct 12, 2019	3.4 	11
8.	Client G	424847...	Oct 13, 2019	3.5 	6
9.	Client H	424847...	Oct 10, 2019	3.5 	6

 At Last, Automatic Bid Supervision for Adwords

N

to: info@cloudbakers.com

It's a fact that most pay per click consultants spend more time preparing your weekly progress report for your business than working on developing your account? Were you aware that they have never heard of **Engagement Fraud**, and if they did they will reject it because they would lose your account if they told you? Did you know that your Adwords Consultant exclusively rely on Google conversions tracking to adjust your campaign.

There exists a better way! We do not merely rely on Google Conversions or Google Analytics, rather we examine your visitors every touch, click and mouse movement. Then utilizing the behavioral patterns of users that successfully converted on your store we optimize your bids to increase the likelihood of buying traffic that matches those behavioral patterns.

Visit our website to know more about how we can help your business make the most of your Pay Per Click campaign.

HOW WILL THIS CHANGE BUSINESS?

Cleaner Data

Extend to Other Sources

Sales Risk Area Warnings



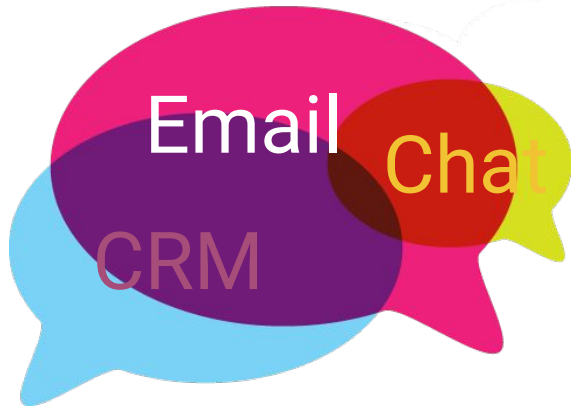
Monitoring sentiment analysis has the side-benefit of improving how tickets are categorized - e.g. spam tickets are marked as such and not counted in performance metrics

HOW WILL THIS CHANGE BUSINESS?

Cleaner Data

Extend to Other Sources

Sales Risk Area Warnings



It's also not just the helpdesk, it can also be done in CRM communications emails / phone transcripts / chat -- any customer touch point

HOW WILL THIS CHANGE BUSINESS?

Cleaner Data

Extend to Other Sources

Sales Risk Area Warnings



Monitoring sentiment gives client managers real-time warning of risk areas that need attention.

Leads to improved close rates measurable in their CRM.

03

Putting it into Action

EASY TO RESELL

Instant CSAT

Tiers

- Level of Analysis
- Level of Cleansing
- Level of Integration

INFRASTRUCTURE MANAGED SERVICES

Ten years of being a Google Cloud Premier Partner and about what people want and need to make their team work better. With Cloudbakers as your MSP, you're able to hire for the strategic initiatives, while our Google Cloud center of excellence handles the entire middle layer of your technical responsibilities.

One Time	Monthly
 1 Technical Environment Review USERS SERVERS NETWORKS APPLICATIONS	 1 GCP Newsletters (performance optimization)
2 Identify Key Success Metrics to Track ROI	2 Utilization Reports
3 Google Cloud Best Practice Review	3 Snapshot Management Review
SETUP ONGOING SUPPORT	4 Incident Report
4 Proactive Dashboards for Monitoring	



4
IAM Provisioning & Management

5
Workload & Service Provisioning

Google Cloud Premier Partner
Application Development

The right conversations at the right time

cloudbakers

SMART ANALYTICS: INSTANT CSAT

Serving Up Happy Customers and the Data to Prove It

When it comes to measuring true customer satisfaction, a simple survey just won't cut it. With a custom Instant CSAT solution built from Google's powerful machine learning services, you get real, easy-to-read insights to help you increase customer loyalty without having to ask your customers a single question. Yeah, it's that easy.



A WHOLE NEW WAY TO TRACK CUSTOMER SATISFACTION

- Know the sentiment of your customers for **better understanding** of their experiences
- **Track trends** in overall customer satisfaction
- **Discover correlations** you've never noticed and predict which customers need your attention
- Gain insights to **improve process** and coach your employees
- Use with **any data source**, including CRM, email, website chat boxes and more

Our Recipe for Success

-  YOUR DATA SOURCE
-  OUR INGREDIENTS FROM GOOGLE
-  YOUR REPORT FROM US

EASY TO MARKET

HTML click map

The image shows an email invitation for a Google Cloud Meetup. At the top is the Google Cloud logo. Below it, the text reads "You're Invited!" followed by "Big Data, AI, and Machine Learning Meetup". The event details are: "Wednesday, May 29, 2019, 2:30 PM-6:00 PM" at "Google's Chicago Office, 320 N Morgan St, #500, Chicago, IL". A "Register Now" button is highlighted with a "50%" badge. Below the button, there is a paragraph of text: "Join the Google Cloud Team for an afternoon learning about Big Data, AI and ML in the Cloud. Topics will include:" followed by two bullet points. The first bullet point is "Benefits of using GCP services for building out your data lake, including scalability and cost efficiency; ingesting data; processing and analyzing your data, with key recommendations for maximizing the power of GCP as it pertains to data lakes." The second bullet point is "AI and ML on GCP for Critical Insights. Learn to leverage Artificial Intelligence and Machine Learning on Google Cloud Platform from the perspective of developers, data scientists, and other business leaders. Topics will include business use cases for Google's AutoML and Cloud AI Platform to help unlock the value of data within and tools on GCP." At the bottom, there is a paragraph: "This event will conclude with a networking reception, where you'll have the opportunity to engage and connect with fellow enthusiasts of the Google Cloud community." and a final line: "We hope to see you there!"

Google Cloud

You're Invited!

Big Data, AI, and Machine Learning Meetup

Wednesday, May 29, 2019
2:30 PM-6:00 PM

Google's Chicago Office
320 N Morgan St, #500
Chicago, IL

Register Now 50%

Join the Google Cloud Team for an afternoon learning about Big Data, AI and ML in the Cloud. Topics will include:

- **Benefits of using GCP services for building out your data lake**, including scalability and cost efficiency; ingesting data; processing and analyzing your data, with key recommendations for maximizing the power of GCP as it pertains to data lakes.
- **AI and ML on GCP for Critical Insights**. Learn to leverage Artificial Intelligence and Machine Learning on Google Cloud Platform from the perspective of developers, data scientists, and other business leaders. Topics will include business use cases for Google's AutoML and Cloud AI Platform to help unlock the value of data within and tools on GCP.

This event will conclude with a networking reception, where you'll have the opportunity to engage and connect with fellow enthusiasts of the Google Cloud community.

We hope to see you there!

Top clicked links

Combined HTML Plain text

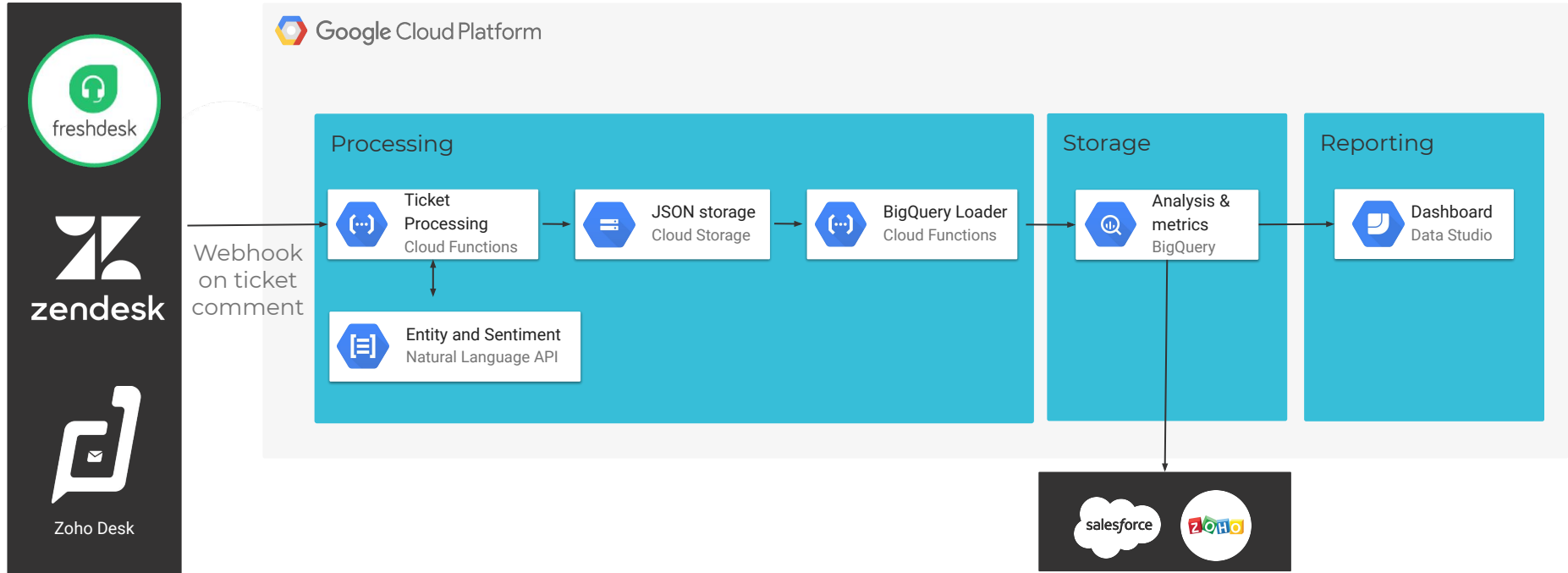
LINK	CLICKS
Register Now	2
https://www.cloudbakers.com/	2

Top engaged contacts

Opens Clicks

	30+
	15
	15
	10

EASY TO DEPLOY





cloudbakers®

We bring the cloud down to earth.

Rate This Session In The App

1. Tap on Agenda icon

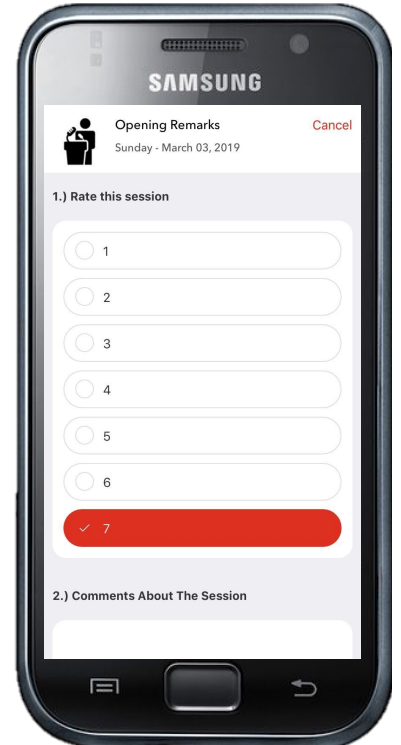
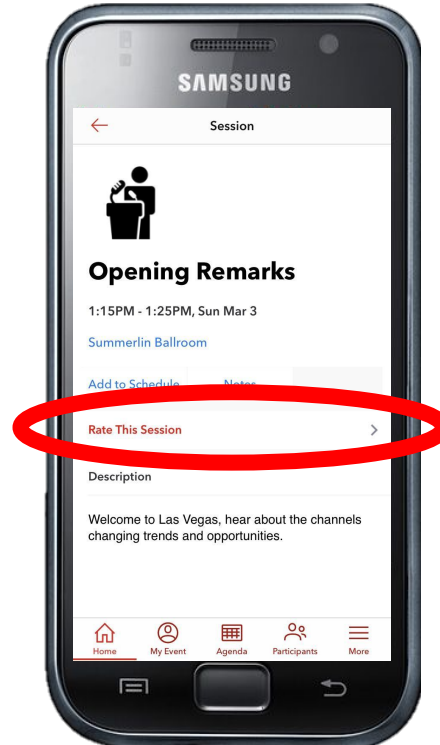


2. Tap on the session you want to rate

3. Rate session on scale of 1 – 7
(7 being highest!)

4. Write a comment (if you want)

5. Hit Submit!



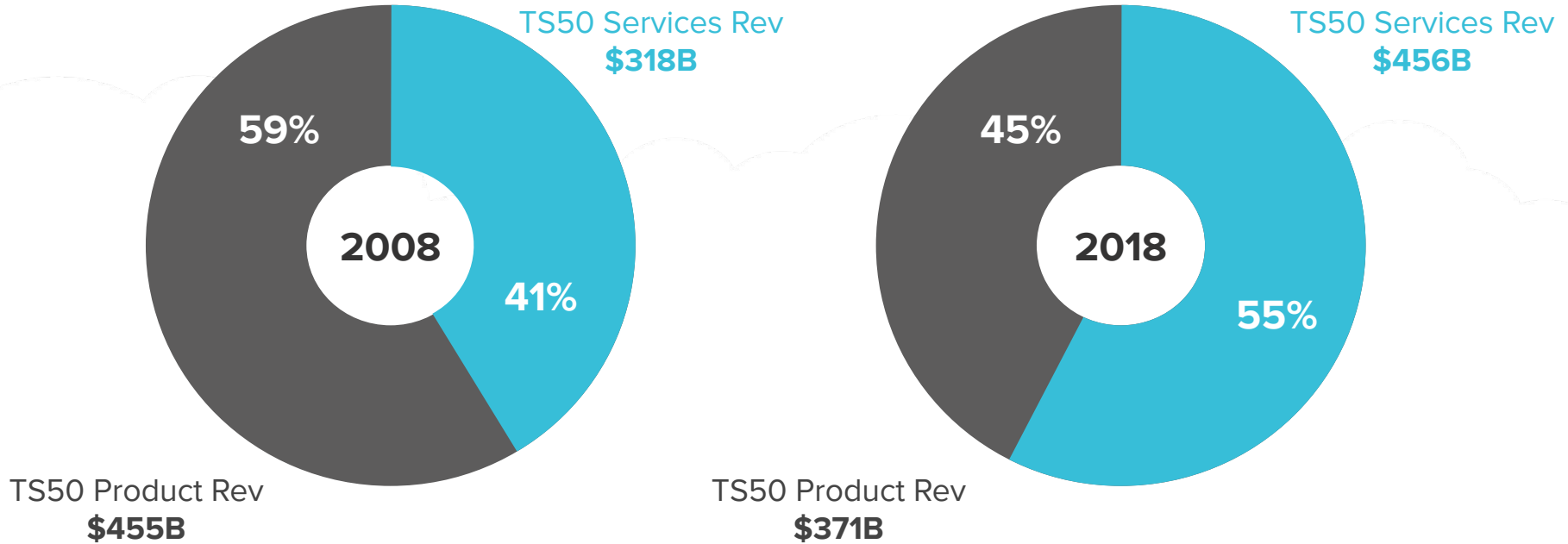


X1



Appendix Slides

THE STATE OF MANAGED SERVICES & XaaS



*Technology Services Industry Association 2019 , “The state of managed services and XaaS”

Cattle vs. pets

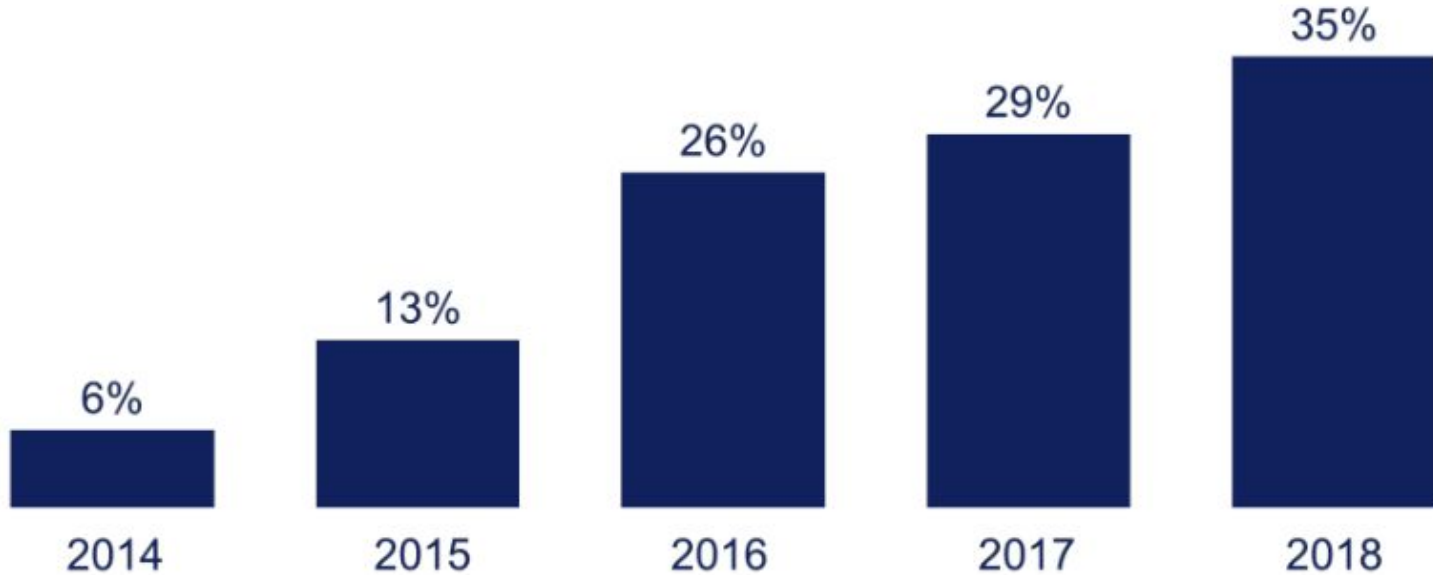


- Rebuild
- vm001.srv.company.com
- Provision vmXXX (vertical)
- Rebuild
- OSLogin, GCP IAM



- Patch
- woody.servers.company.com
- Upgrade HDD/RAM/CPU (horizontal)
- Defragment HDD
- LDAP or SSSD or /etc/passwd

MANAGED XaaS AS A % OF MS REVENUE



How we are approaching XaaS / MSP



10X difference in Business Value



.5X - 1X Net Revenue

For traditional managed services on reseller revenues

5X - 10X Net Revenue

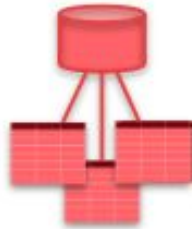
For revenues bundled into an XaaS offering

WHAT BUSINESS QUESTIONS HAVE WE BEEN ABLE TO ANSWER?

Old Fashioned RDBMS



Traditional Data Warehousing



Hadoop/Spark Ecosystem



Smart Analytics



Past

Operational metrics:

“What were our sales for last Month/Quarter/Year?”

Past

Dimensional pivot:

“What were sales by region by product category?”

Past

Aggregation by Dimension across Time Windows:

“What was our conversion rate for age group 18-35 over the last 6 quarters?”

Measure Now & Tomorrow

Customer Examples:

1. **Predict customer intentions**
2. **Re-imagine customer experience**
3. **Trigger Action**

SIGHT

- Understand the content of an image
- Classify images into categories
- Detect individual objects and faces within images
- Make videos searchable and discoverable



Cloud Vision



Cloud Video Intelligence



Cloud AutoML Vision

LANGUAGE

- Extract information from unstructured text
- Reveal structure and meaning of text
- Translate dynamically between languages



Cloud Translation



Cloud Natural Language



AutoML Translation



AutoML Natural Language

CONVERSATION

- Convert real-time streaming or pre-recorded audio to text
- Synthesize natural-sounding speech with 30+ voices
- Synthesize speech in multiple languages and variants
- Create conversational experiences across devices and platforms



Cloud Speech-to-Text

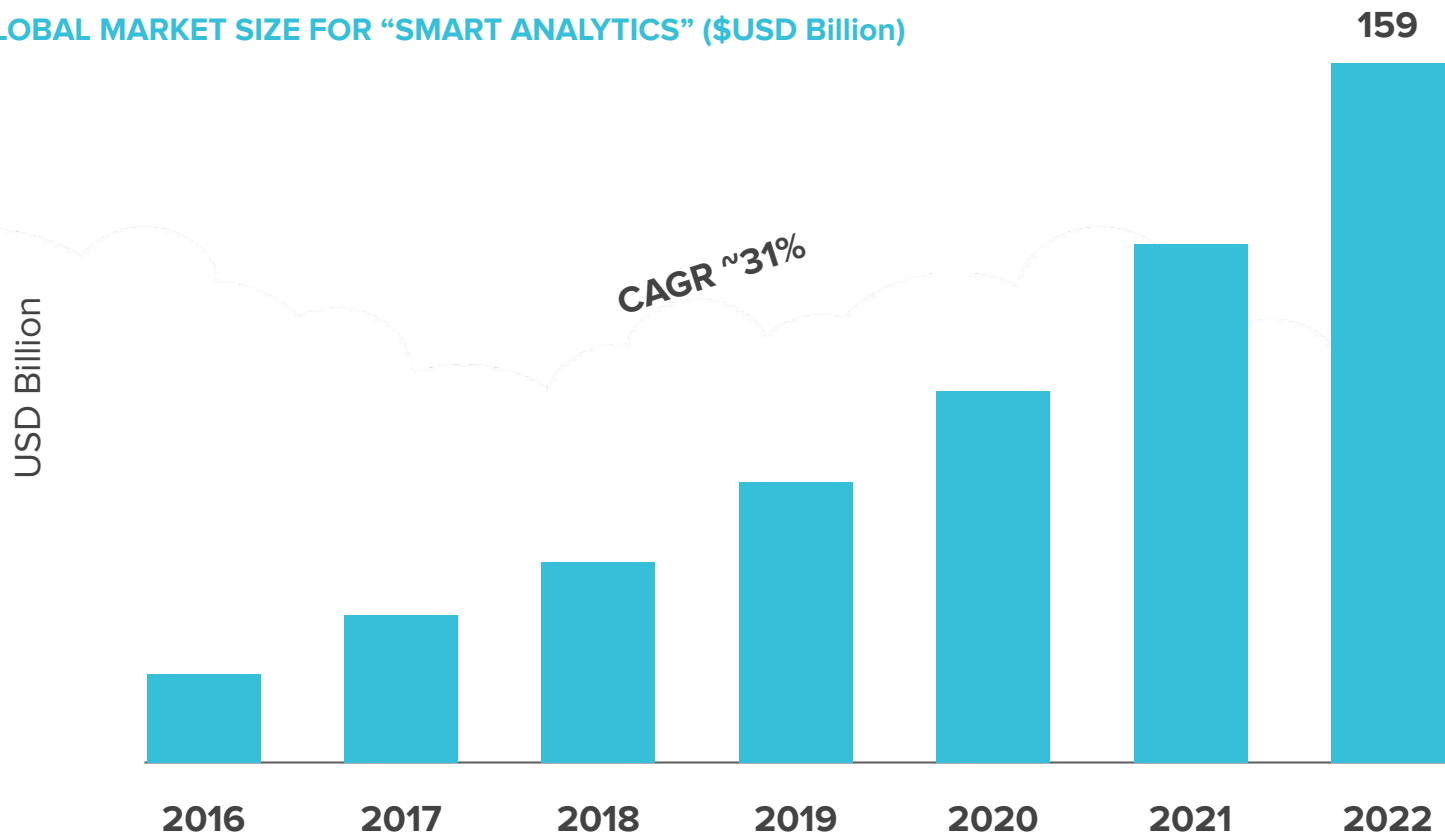


Cloud Text-to-Speech



Dialogflow Enterprise Edition

GLOBAL MARKET SIZE FOR “SMART ANALYTICS” (\$USD Billion)



SENTIMENT ANALYSIS

MSP Pricing Model

Base

Managed
Pipeline

Monthly
Analysis

Monthly
consumption
+ 15%

Cleansed

Managed
Pipeline

Monthly
Analysis

Monthly
Cleansing
Report

Monthly
consumption
+ 20%

Integrated

Managed
Pipeline

Monthly
Analysis

Monthly
Cleansing
Report

CRM+Systems
Integration

Monthly
consumption
+ 25%

Try out the
Pricing Model

bit.ly/ngc19