Financial Analyst Day



November 12, 2019



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Agenda

Time	Topic	Presenter
10:00 – 10:20 AM	Making Customer Service a More Human Experience	Rowan Trollope, CEO
10:20 – 10:40 AM	Product Vision and Roadmap	Anand Chandrasekaran, EVP of Product Management
10:40 – 11:05 AM	Artificial Intelligence Deep Dive	Jonathan Rosenberg, CTO and Head of AI
11:05 – 11:15 AM	Modern and Agile Engineering Engine	David Pickering, EVP of Engineering
11:15 – 11:35 AM	Scaling our Go-to-Market and Service Delivery	Dan Burkland, President
11:35 – 11:50 AM	Break	
11:50 – 12:20 PM	Customer Panel: Delivering Measurable Value	Dan Burkland, President
12:20 – 12:35 PM	Powerful Financial Model	Barry Zwarenstein, CFO
12:35 – 1:00 PM	Q&A and Close	Executive Team
1:00 – 2:00 PM	Lunch Reception	

Five9 Leadership Team



Rowan Trollope
CEO
CISCO
Symantec.



David Pickering

EVP, Engineering

Inituit ORACLE



Dan Burkland
President
CISCO

CEOTEL



Scott Welch
EVP, Cloud Operations

in inContact.

McLeodUSA



Barry Zwarenstein
CFO

VeriFone



Anand Chandrasekaran

EVP, Product Management

Snapdeal



Jonathan Rosenberg
CTO and Head of AI
CISCO Skype



James Doran
EVP, Strategy & Operations
CISCO Symantec.



Ryan Kam
CMO
APPDYNAMICS Solesford



Tricia Yankovich SVP, Human Resources





Making Customer Service a More Human Experience

Rowan Trollope, CEO



1 Large Market Opportunity



Strong

2 Execution
Engine

Proven leadership team

Differentiated strategy

Market-winning product

Robust cloud platform

Strong go-to-market machine

3 Delivering Growth and Profitability



Large Market Opportunity

Key trends

Five9 positioning

Addressable market



The CX Paradox

Companies spend

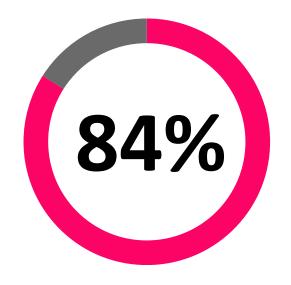
\$230B+

annually on their contact centers...

...but continually deliver poor customer service experiences

The Problem:

Consumers Dislike Customer Service



Of end customers say being treated like a person, not a number, is very important to winning their business

- Difficulty speaking to an agent
- Depersonalized and disconnected experiences
- Labyrinthian IVR trees
- Long wait times



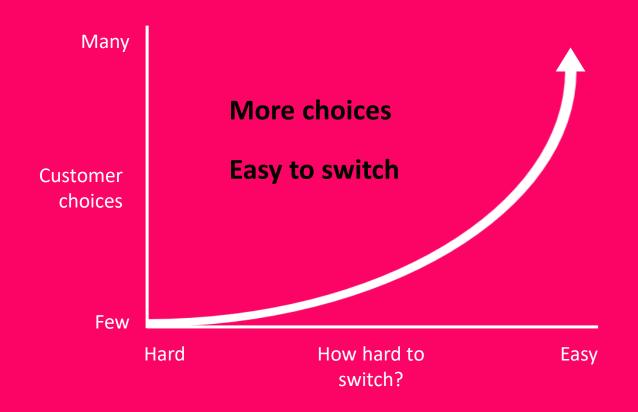
Bad Customer Service is No Longer an Option

World of the Modern Day Consumer

Empowered to:

- Review
- Discover
- Speak up
- Compare
- Buy anywhere, anytime





Incentive to deliver GREAT service is increasing – exponentially



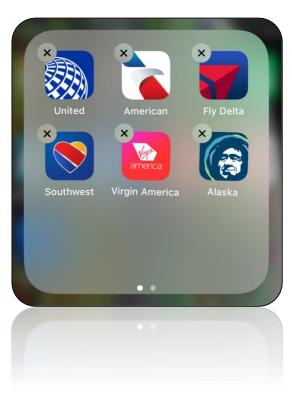
Food Delivery



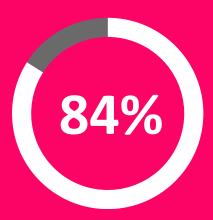
Retail



Travel



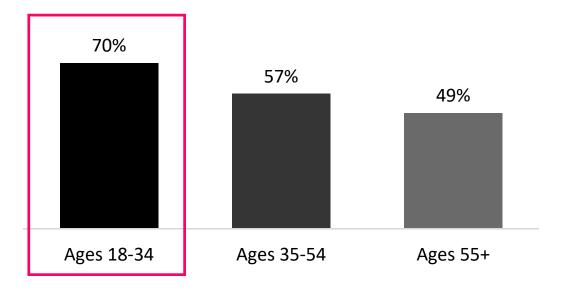




Of customers say the experience a company provides is as important as its products and services

Customer expectations are higher than ever...

Increasing expectations for customer service

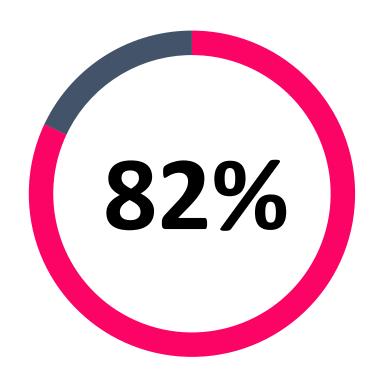


...driven by Millennials and Generation Z



Customer Service Must Transform

(one of the most important parts of Digital Transformation)



Of service decision makers say their company's customer service must transform to stay competitive



Large Market Opportunity

Key trends

Five9 positioning

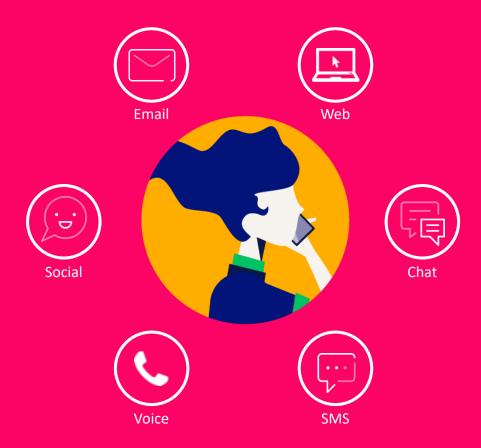
Addressable market



Five9 takes advantage of the CX imperative by enabling companies to transform their service experiences



Customer



Desire for great customer service

Business



Systems of record with customer data



Five9 Enables Companies to Engage Better

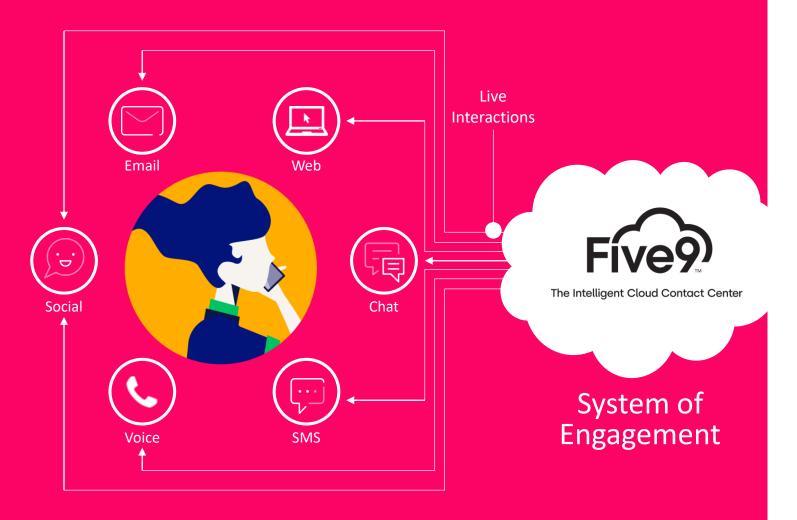
1 Serve customers in the channel(s) they prefer

2 Unify customer information into a single view

3 Modern engagement platform



Customer



1

Serve customers in the channel(s) they prefer

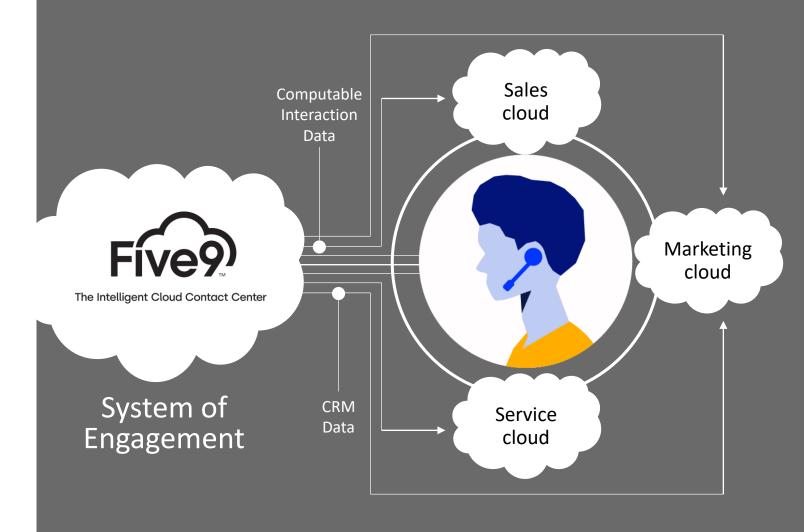
- Fully blended, omnichannel platform
- Any channel, voice or digital
- Any interaction, live or live-ish
- Anytime and anywhere

2

Unify customer information into a single view

- Hand-in-glove CRM integration
- Enrich CRM insights with Five9's computable interaction data
- Personalize service across the customer journey

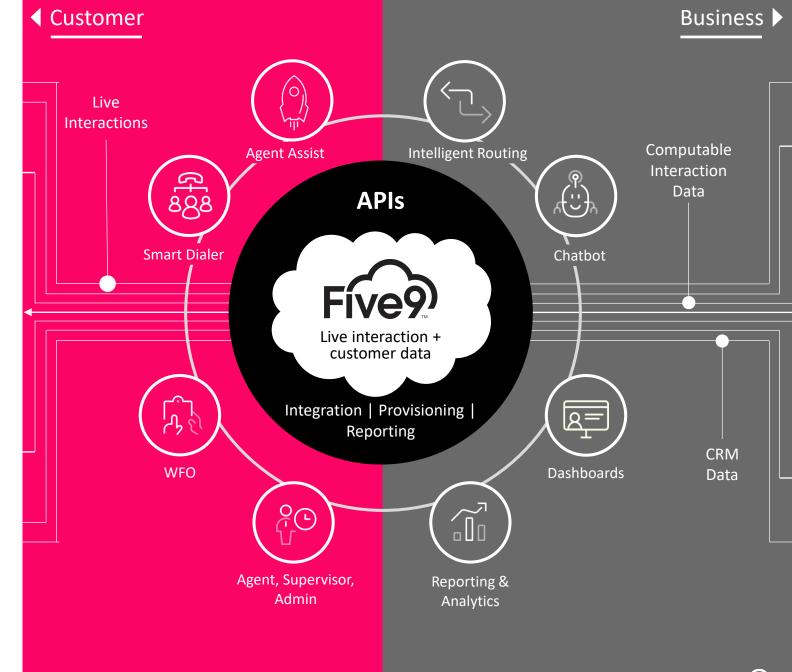
Business



3

Modern engagement platform

- Intelligently route customers to agents that best address needs
- Provide best-in-class tools to agents, supervisors and admins
- Turn interaction data into actionable insights





Five 9 is a Leader in Cloud Contact Center Software



Five9 Named a Leader for the 5th Year Gartner in a Row in Gartner Magic Quadrant Contact Center as a Service

Figure 1. Magic Quadrant for Contact Center as a Service, North America



Source: Gartner (October 2019)

FORRESTER® Five9 Named a Leader in The Forrester Wave™: Cloud Contact Center



Large Market Opportunity

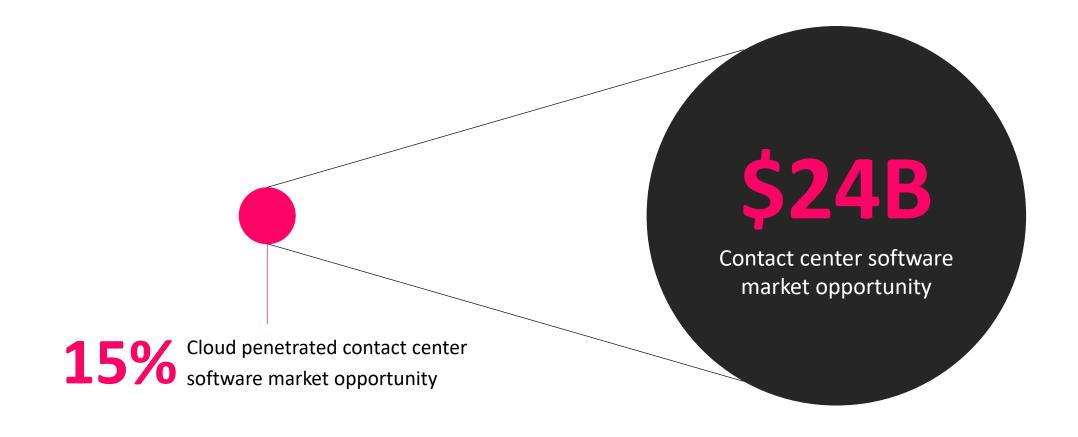
Key trends

Five9 positioning

Addressable market



Large and Underpenetrated Market Opportunity





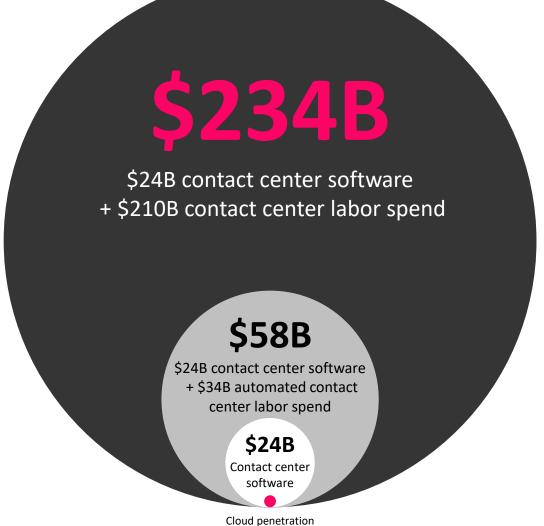
Longer-Term Expansion into the Market for Contact Center

Labor Spend



Percentage of customer service representatives that will be displaced due to automation by 2030

– McKinsey



Long-term addressable market opportunity



The Market is Strong

Legacy to cloud

Digital transformation



1

Market Summary

Bad customer service is no longer an option

Customer service must transform

Large and expanding market opportunity

Five9 positioned to capitalize on tailwinds



2

Strong Execution Engine

Proven leadership team

Differentiated strategy

Market-winning product

Robust cloud platform

Strong go-to-market machine





Strategic Pillars Fuel Growth

Build a great enterprise product and platform Execute against our AI roadmap

Expand our go-to-market engine

Enable our customers to succeed

Invest in our employees and culture



Product Vision and Roadmap

Anand Chandrasekaran, EVP of Product Management





My Journey to Five9



From 150M to 8B+ P2B messages

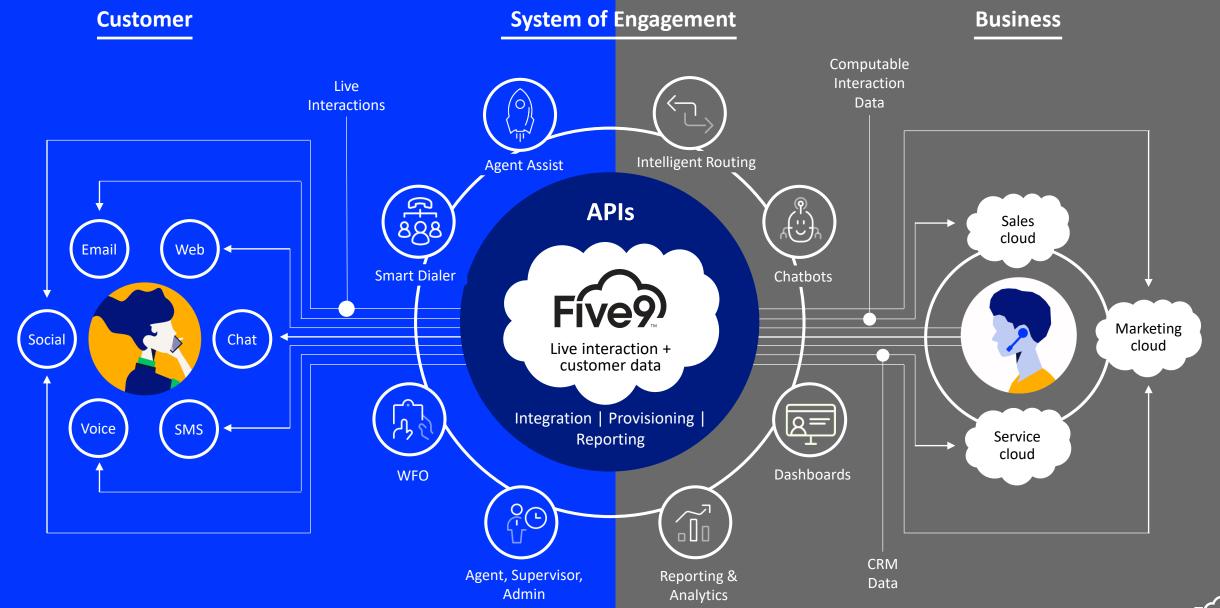


Customer care for 20M+ users





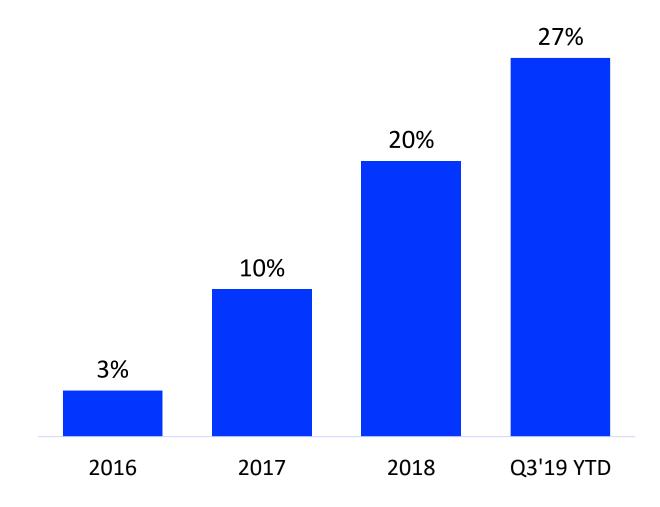
Recap: Serve | Unify | Modernize



We are accelerating the pace of innovation

Non-GAAP R&D Expense

% YoY Growth





Product Investment Themes

1. What we've done

2. Where we're going

<u>Deliver</u> greater enterprisegrade capabilities

Accelerate the Large Enterprise cloud transition



Looking Back on 2019: Strong Focus on Large Enterprise

90+ new features; Customer NPS at 58

Enterprise scale

- Thousands of concurrent agents on a single domain
- Full application stack

Voice modernization

- GA of FVS, a scalable telephony platform for new deployments
- Agent upgrades

Salesforce integration

 Deeper integration with Salesforce CRM, including Einstein and Lightning

Open platform

- New APIs and SDKs for UC and CRM (Pegasystems etc. live)
- Integration of external IVR/IVAs

Partner integrations

- New integrations with CRM products from Oracle, ServiceNow and Microsoft
- New integrations with UC products from Fuze and TetraVX

User applications

• Enriched user interface for both agents and supervisors

Omnichannel

 Enhancements to digital channels, including chat and email

WFO

 Delivery of several new features with key partners, including Verint



Enterprise Scale

Scalability Features



Five9 Voice Services (FVS) GA



SIPREC to Verint QM



Engagement Workflow Scale



Omnichannel Scale

Add-On Applications



Performance Dashboard



Gamification



Verint QM



Verint WFM



Verint Speech Analytics

Thousands of concurrent agents

... on a single domain

... with multiple channels

... and with full application stack

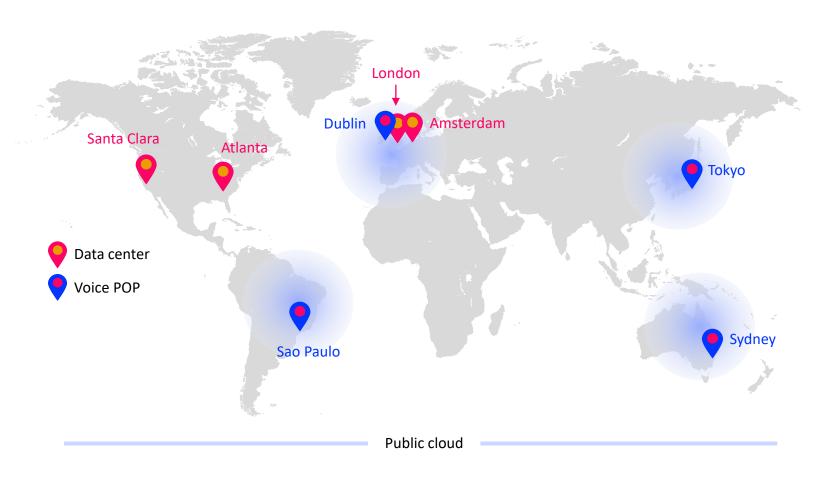
Supporting many thousands across multiple domains

Full stack CCaaS solution for large enterprises

"Five9 Genius now offers expanded scalability to support thousands of agents on a single tenant domain" – Gartner



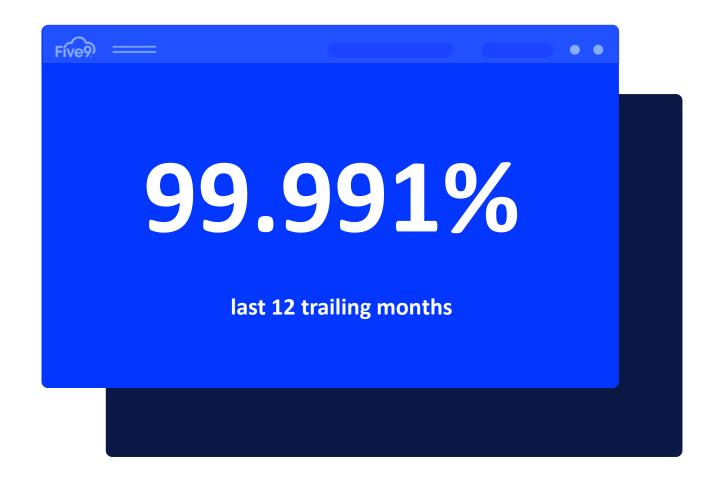
Five 9 Global Voice



- Enables customers to have localized voice points of presence (POP) in AWS nodes around the world
- Ensures great quality audio wherever agents are; supports "follows the sun" model
- Future support for new agent and carrier leg connectivity options at the POPs



Platform Availability





<4.0

Minutes / month of accumulated downtime

Security

Certifications & Attestations





Regulations



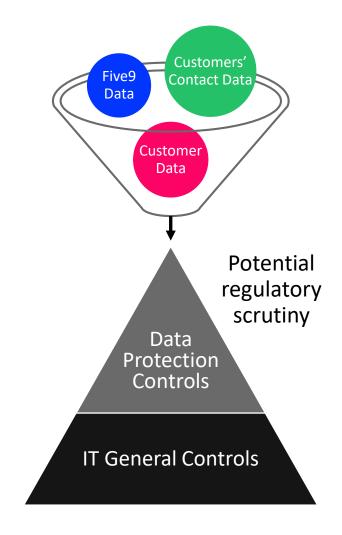




Best Practices









Product Investment Themes

1. What we've done

2. Where we're going

<u>Deliver</u> greater enterprisegrade capabilities Accelerate the Large Enterprise cloud transition



Accelerating the Large Enterprise Cloud Transition

1 Enabling businesses to **be where their customers are**

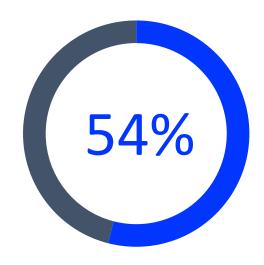
2 Playing well with others

3 Elevating our **platform flexibility**

4 Executing our Al/Agent Assist roadmap

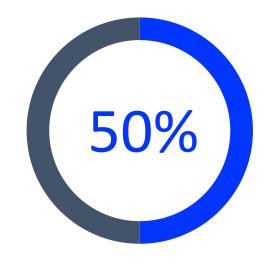


1 We Live in an Omnichannel World



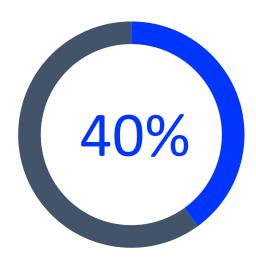
Of customers have used email customer service channels in the last year

- Forrester



Of customers say the most critical issue is "providing a seamless experience across multiple channels"

- Incite Group



Of customers prefer talking to a real person for complex interactions

- American Express



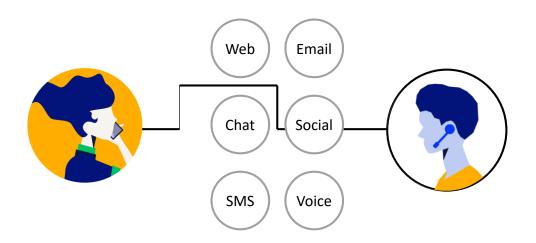
1 Reimagining Omnichannel

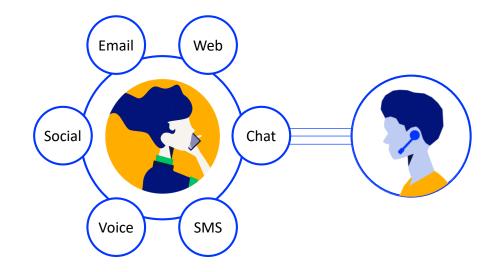
Today/Competitors



Route the incident









1 Five9 Omnichannel Product Leadership



1 50+ Features to Reimagine Omnichannel

Channels	Applications	Features	Platform
Chat	Supervisor	Google Analytics	More encryption
SMS	Reporting	Encryption at rest	Worksheets
Social	WFO/WEM	WordPress	Integrations
Email	Routing	More languages	
Chatbot			























2 Strong Track Record of Playing Well with Others...

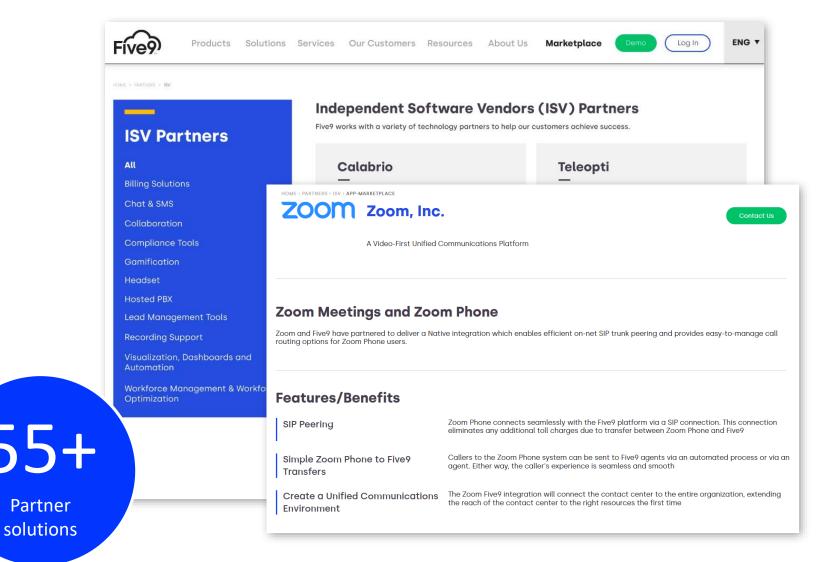




2 ...and We're Making it Even Easier for our Partners

- Launched UC and CRM SDKs to seamlessly build integrations
- Launched new 'App Marketplace' for ISV partners
- Virtuous cycle for partners to leverage Five9 incumbency

Partner

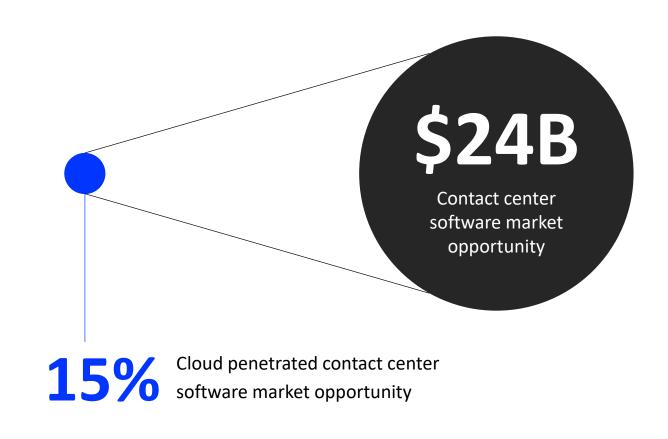




3 Problem: Large Enterprises Find it Challenging to Migrate to Cloud

- On-premise solutions have <u>deeply</u> <u>integrated workflow</u> with in-house information systems
- Current approaches <u>are not</u>
 <u>optimal</u> for migrating to cloud.

 Either:
 - Low customizability and easy to implement...
 - ...or high customizability and difficult to implement





3 Announcing: Five9 Intent to Acquire Whendu







"Five9 Acquires Whendu to Accelerate Enterprise Adoption of Cloud Contact Centers."



3 Solution: Make it Easier than Ever to Transition to Cloud









1. Migrate Large Enterprises to the cloud

2. Enable Large Enterprises to **do more** once on the cloud

- Maximize cloud-based contact center investments through out-of-the-box application adapters
- Make it easier for organizations to integrate Five9 with their existing environments and carry forward customized workflows

 Empower 'citizen developers' to connect information systems and act on real-time interactions through Whendu's no-code, visual application workflow



3 Solution: How Whendu's 'No-Code' Workflow Works

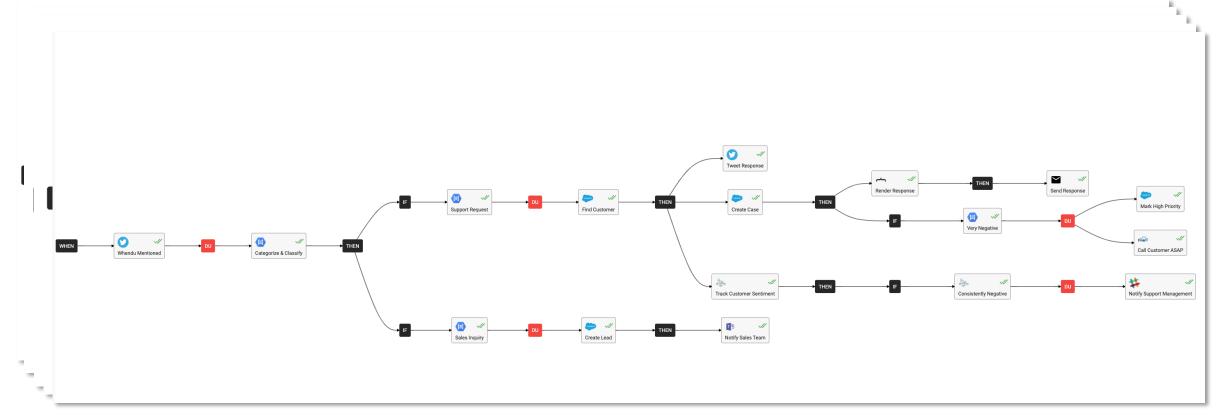
Follow up with leads in moments

Escalate omnichannel support

Monitor SLAs proactively

Add overflow agents during demand spurts

Respond to social mentions





3 Whendu Turbocharges Five9's Partner Ecosystem







55+

Partners

App Marketplace Live!







50+

NEW out-of-the-box application connectors

























Summary: Product Investment Themes

1. What we've done

2. Where we're going

<u>Deliver</u> greater enterprisegrade capabilities Accelerate the Large Enterprise cloud transition



Artificial Intelligence Deep Dive

Jonathan Rosenberg, CTO and Head of Al



My Journey to Five9



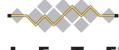
CTO Collaboration

AI, Webex Teams, Cloud



Chief Technology Strategist

AI and Cloud



I E T F

Co-Inventor SIP: Industry standard VoIP 3rd most impactful author of internet standards¹





Five9 Mission

Make Customer Service a More Human Experience



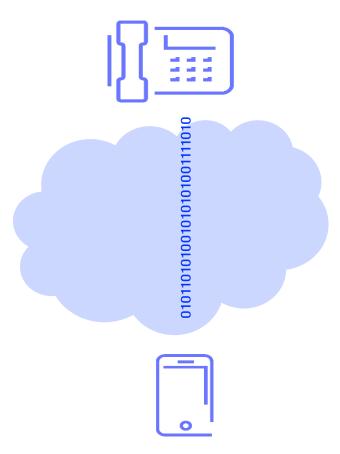
Al Mission

Make Customer Service a More Human Experience

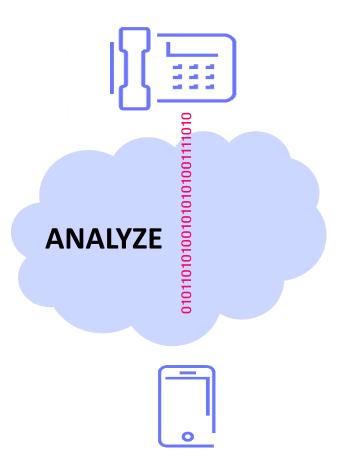


Technology Opportunity

1999-2019 Move the Bits



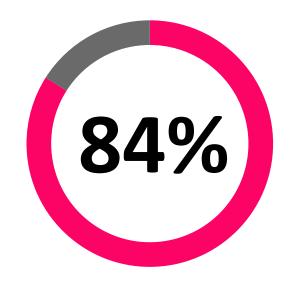
2019 - ? Understand the Bits





The Product Opportunity:

Consumers Dislike Customer Service



Of end customers say being treated like a person, not a number, is very important to winning their business

- Difficulty speaking to an agent
- Depersonalized and disconnected experiences
- Labyrinthian IVR trees
- Long wait times



- Why do I have to say who I am three times?
- Why don't you know why I called it's obvious?
- Why don't they know what steps I've already taken?
- Why do I need to get put on hold all the time?
- Why do I need to repeat everything?
- Why do I need to wait for the agent to type everything?
- Why can't I get my issue resolved quickly?
- Why wasn't the agent empathetic and friendly?
- Why do I need to call back?

We all know the pain points.

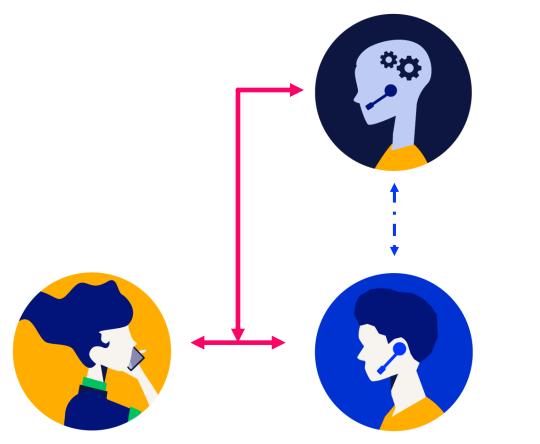
Customers expect better.



What is our strategy to capitalize on this opportunity?

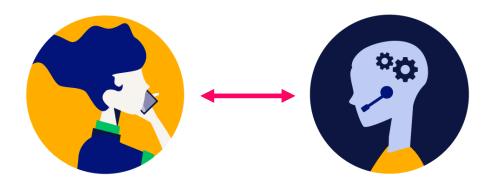


Two Approaches to AI in the Contact Center



Agent Assistance

Human to Human Machine Listens in

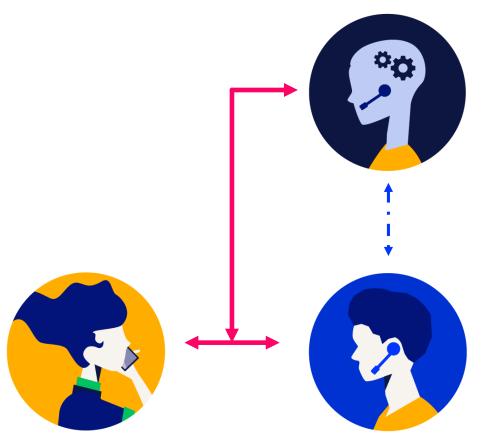


Intelligent Voice Assistant (IVA)

Human to Machine



Two Approaches to AI in the Contact Center



Agent Assistance

Human to Human Machine Listens in

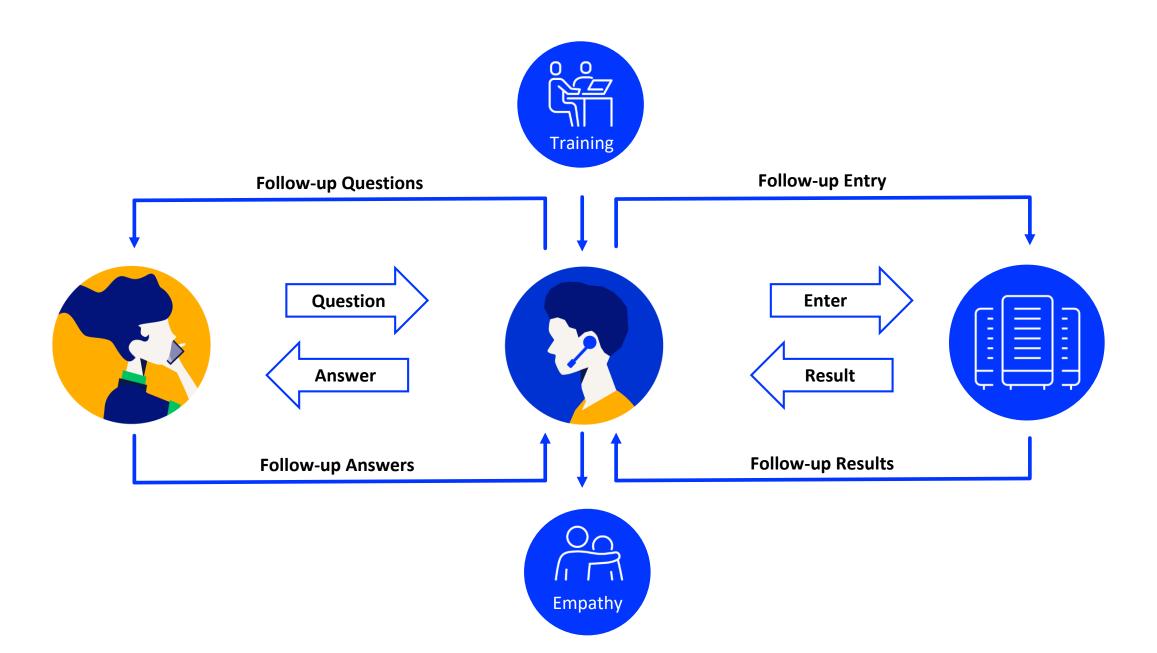
Our Strategy: Focus on Agent Assistance

- ✓ No risk to customer experience
- ✓ Saves money by reducing handle time
- Feedback loop enables self-learning
- Leverages our services capability

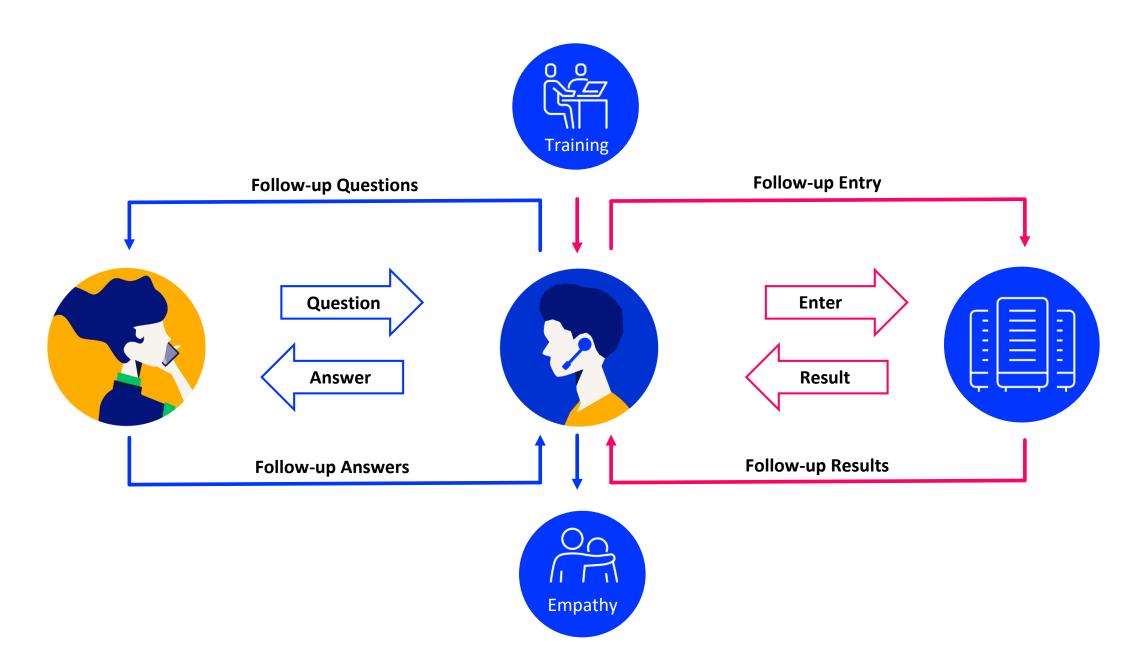
And we won't:

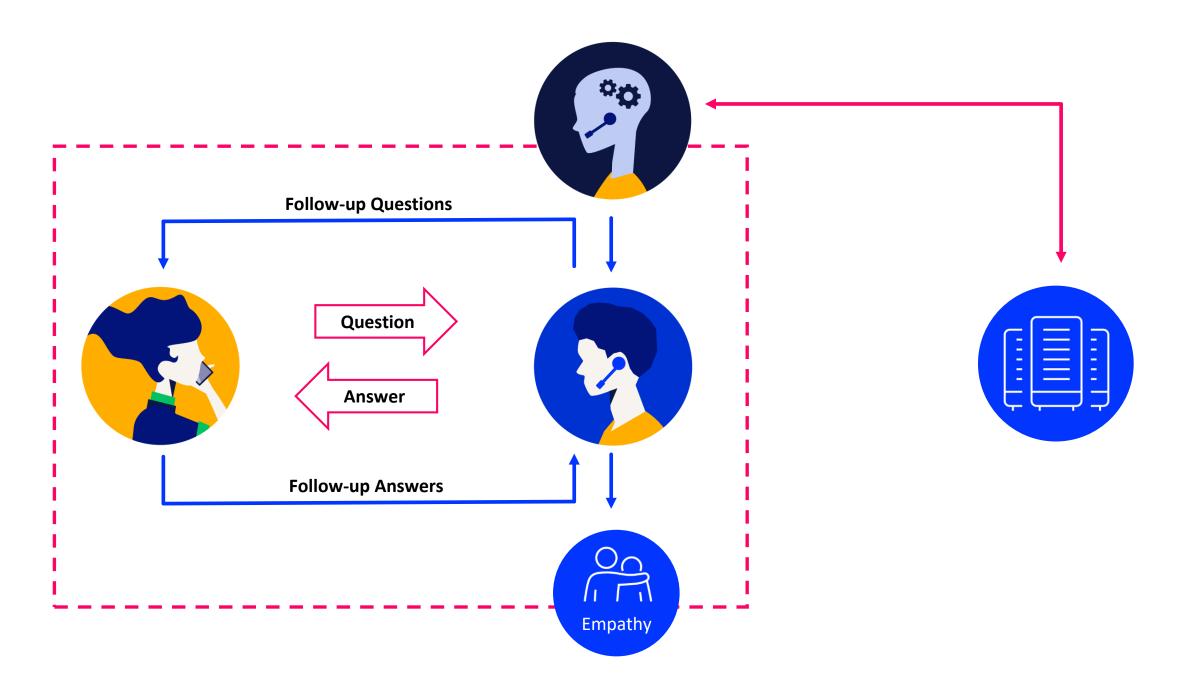
- X Build our own IVA
- X Build our own AI models









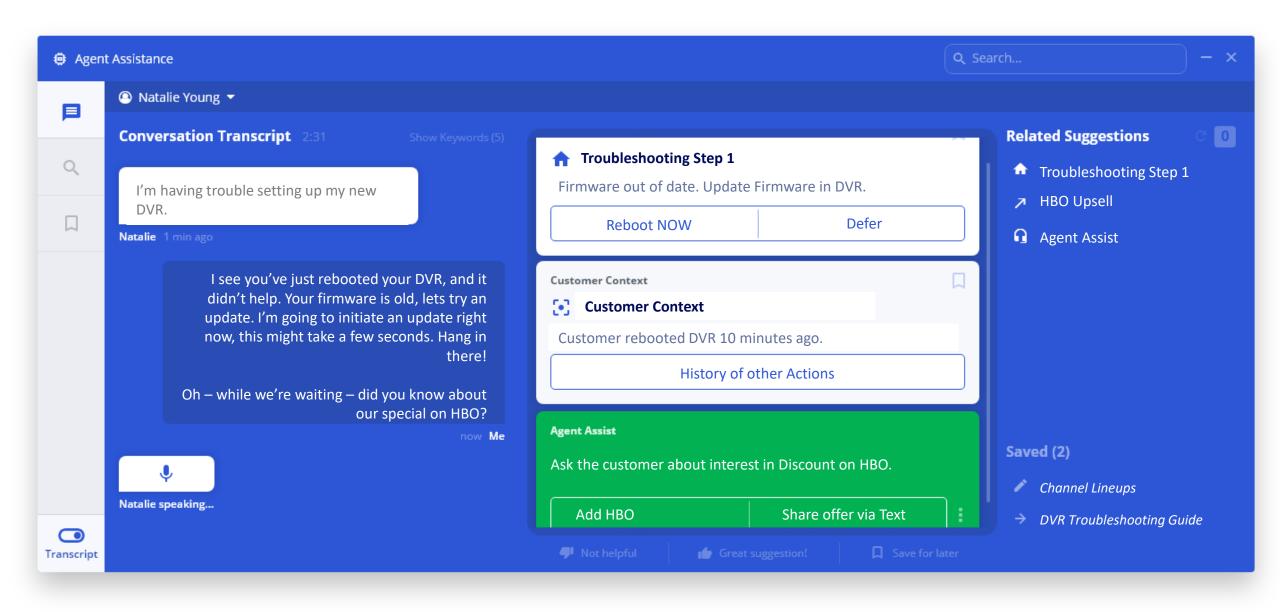




Example:

The Call to the Cable Company





MCKESSON

Ed AlbrektsenDirector, Vendor Solutions and Audit

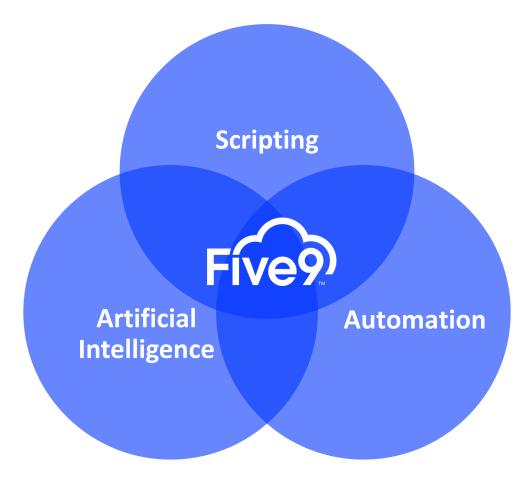




Agent Assist Demo



Three Different Capabilities...



... Create Something New



Status

- ✓ Locked down strategy
- ✓ Validated with analysts and customers
- ✓ Hired team

- ✓ Signed up alpha customers
- ✓ Currently in alpha trials



Modern and Agile Engineering Engine

David Pickering,
EVP of Engineering



My Journey to Five9

intuit.

- Led QuickBooks engineering through 10x growth to 2.6M subscribed businesses
- Transitioned suite to modern SaaS including DevOps,
 Containers and AWS public cloud



 Social and mobile-based advertising and alternative monetization platform with 50M unique visitors daily

ORACLE

 Launched and led the Oracle Interaction Center Suite with inbound/outbound telephony, email and collaboration





Key Objectives

1 Keep the train running

2 Grow engineering team with world-class talent

3 Deliver new Five9 architecture to accelerate speed of delivery



Accelerating SaaS Platform...Delivers Speed and Agility







Containers



Decomp



Data



Interfaces and APIs



Automation



Why it Matters

Deliver more customer benefit

More efficient teams, more focus and more real world experience drive customer benefit

Collaborative and proven

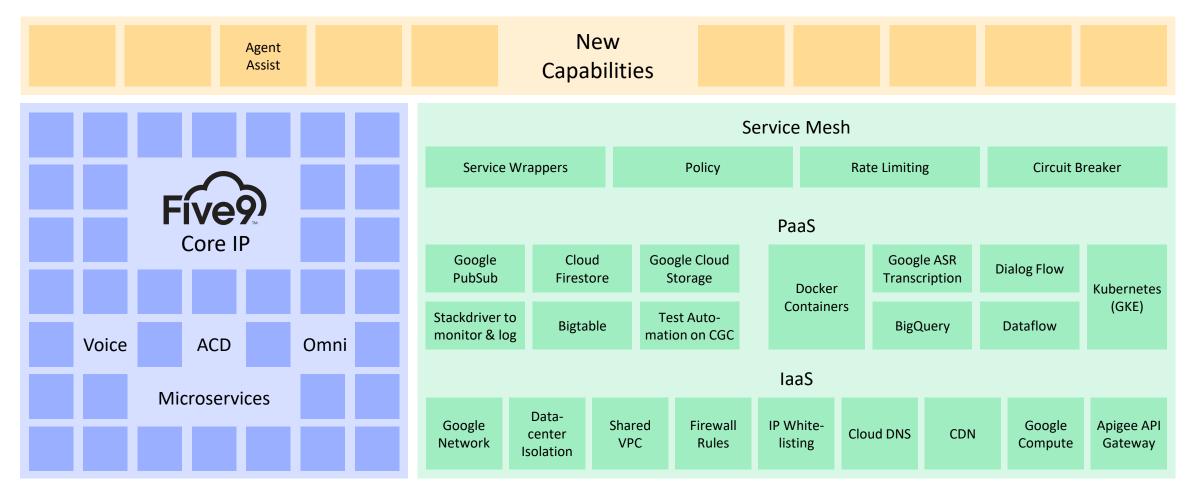
Be humble. Get our best shot into the real world fast, collaborate with design partners and keep tuning until it's right

Modern innovation engine

Cloud-only delivery, best-of-breed components, the most modern platform and world-class uptime. Product innovation is the core of Five9 and this engine fuels customer benefit



Five9 Architecture



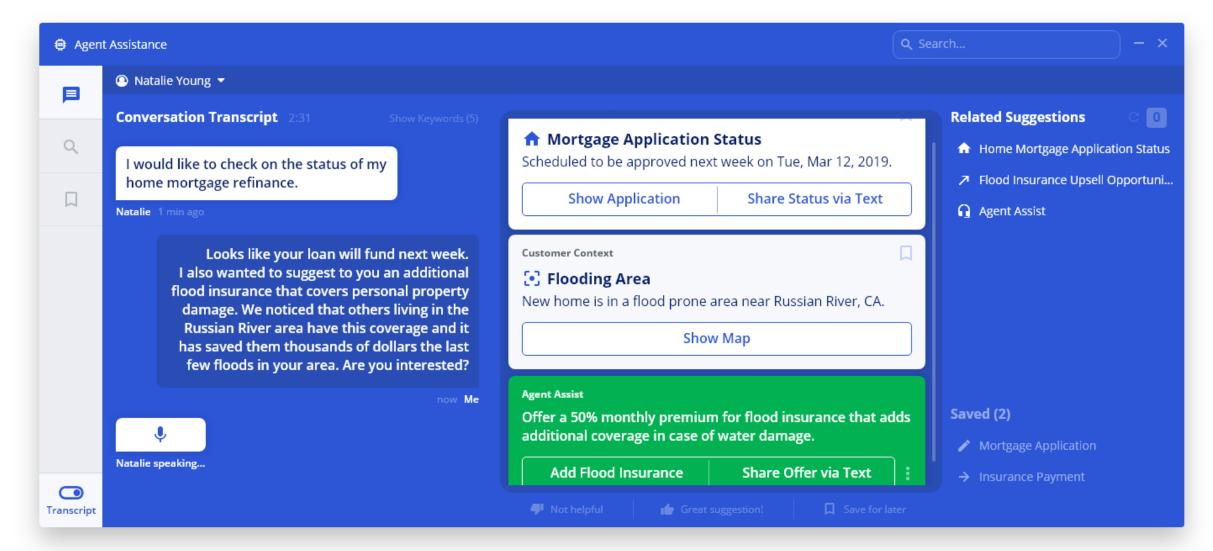
Five9 Cloud

78

Public Cloud



Result: From Concept to Customer Alpha in 3 Months





Scaling our Go-to-Market and Service Delivery

Dan Burkland, President



Why We're Confident

Executing on our Enterprise strategy

Accelerating our reach and market share



Why We're Confident

Executing on our Enterprise strategy **Land**: Landing larger Enterprise customers

Adopt: Maximizing platform value

Expand: Delivering ongoing value

Retain: Nurturing customer success



Land: Landing Larger Enterprise Customers

Scale Platform reliability Security & data protection Feature parity Product innovation



Adopt: Maximizing Platform Value

Onsite delivery

100+

Professionals dedicated to high-touch enterprise implementations

Proven methodology



Phased approach designed specifically for a speedy and successful deployment

Custom solutions

500+

Purpose-built integrations that work with customers' systems and applications

Drive effective platform adoption



Expand: Delivering Ongoing Value

Enterprise Expansion

Optimization

Upsell / Cross-Sell

Additional Seats
Additional Departments

240+

New Applications
New Services

Project-based optimizations over three years

Continuously evaluate customer needs and deliver desired outcomes



Retain: Nurturing Customer Success

Customer Success Managers (CSMs)

100%

Percentage of enterprise accounts covered by CSMs

Technical Account Managers (TAMs)

70%

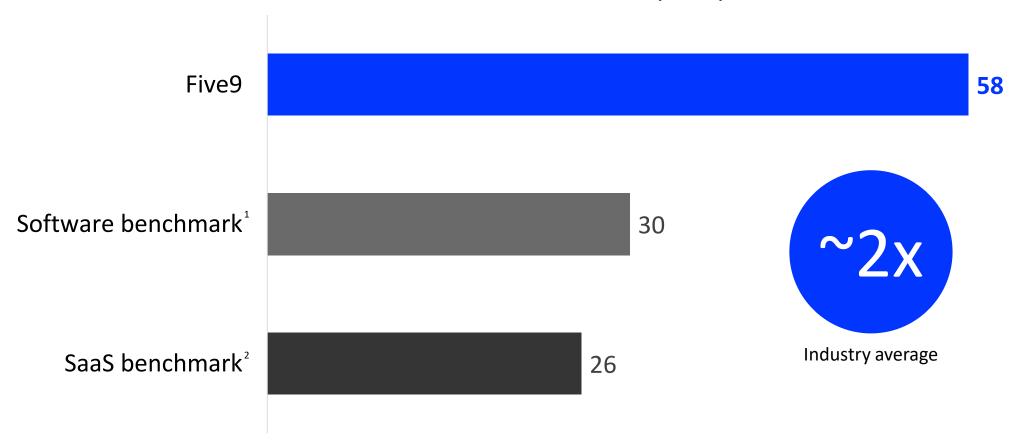
Percentage of enterprise seats with TAM services¹

Foster customer loyalty and retention



Result: Setting the Bar for Customer Loyalty

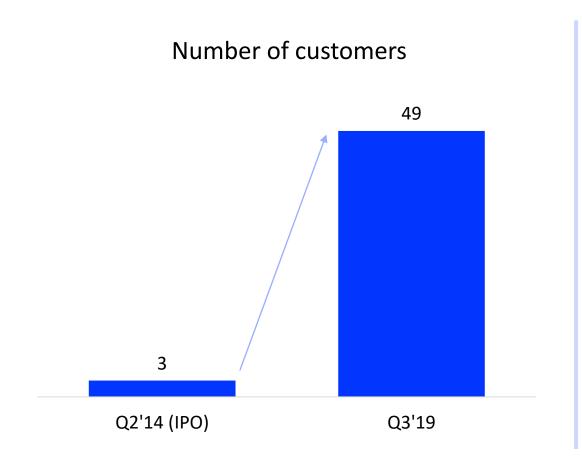
Net Promotor Score (NPS)

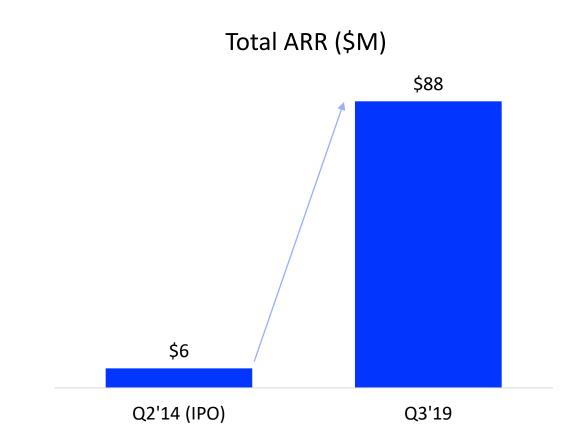




Result: Increasing Enterprise Volume + Scale

\$1M+ ARR customers







Why We're Confident

Executing on our Enterprise strategy

Accelerating our reach and market share



Why We're Confident

Accelerating our reach and market share

- 1 Structuring GTM model for Large Enterprise
- 2 Expanding technology ecosystem
- 3 Deepening SI partnerships
- 4 Scaling channel leverage
- 5 Increasing international footprint



1 Structuring Go-to-Market Model for Large Enterprise

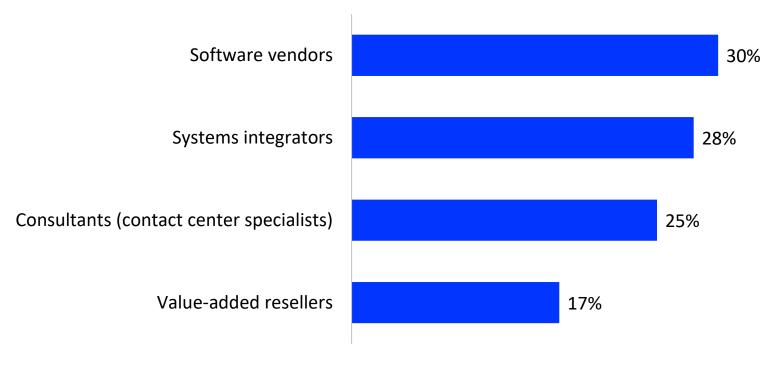
Strategic Enterprise Commercial Type >500 concurrent seats 50-500 concurrent seats <50 concurrent seats >\$1.2M estimated ARR \$120K-\$1.2M estimated ARR <\$120K estimated ARR **Strategic Enterprise Sales Directors Enterprise Sales Directors** Inside sales **Pre-Sales** Model **Enterprise Solution Consultants Commercial Solution Consultants** High touch implementation and optimization with onsite delivery Remote implementation **Post-Sales Strategic Customer Success Managers Enterprise Customer Success Managers Commercial Customer Success Managers** Model Premium support, including TAMs, Managed Services and HyperCare Remote support Independent software vendors (CRM, WFO, UC, others) Partner Channel partners (master agents, resellers, referral partners, others) Ecosystem **Systems integrators**



1 The Go-to-Market Model is Evolving

Stakeholders most likely utilized for next contact center technology decision

% share of respondents





1 Strengthening Sales and Services Leadership Team



Andy DignanSVP, Global Channels & Services







Jake Butterbaugh VP, Channel Sales

CISCO

accenture



Brian Atkinson
VP, International Sales

CISCO



Andy Zazzera
VP, Professional Services

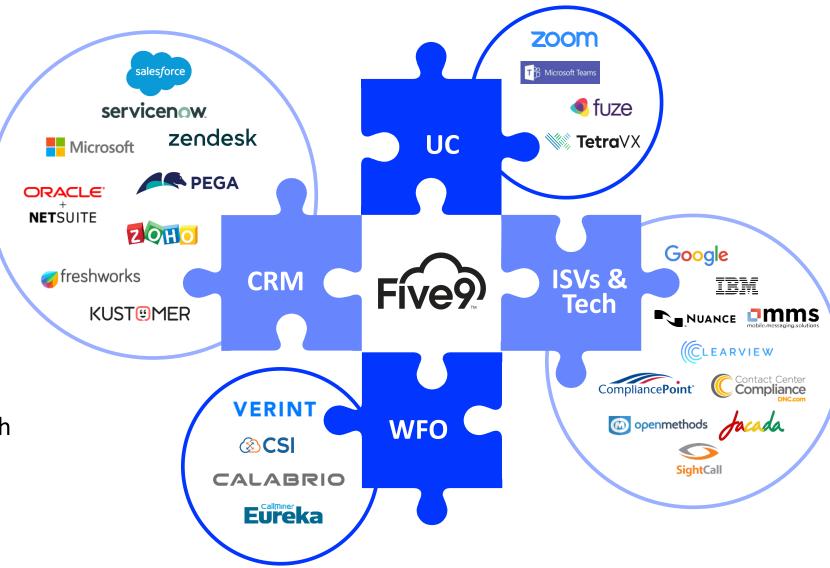






2 Expanding Technology Ecosystem

- Build new partnerships with leading ISVs
- Deepen integrations with existing partners
- Execute on joint GTM and development initiatives, including launch of Five9 app marketplace
- Deliver on recently announced partnerships with Microsoft Teams and Zoom

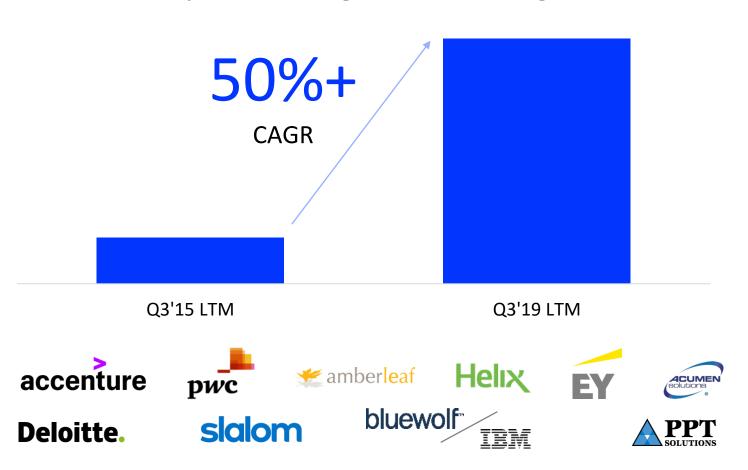




3 Deepening SI Partnerships

- Engage leading global systems integrators with Enterprise relationships
- Leverage systems integrators' strategic positioning in corporate digital transformation initiatives
- Continue development of onboarding and training programs for partner enablement

Systems Integrators Bookings

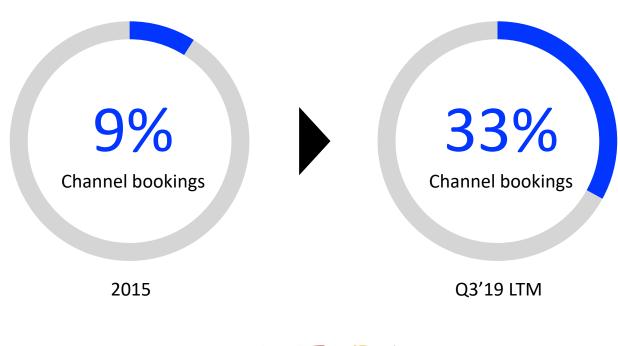




4 Scaling Channel Leverage

- Recruit top resellers, referral partners and master agents with enterprise customer relationships and vertical areas of focus
- Continue development of onboarding and training programs for partner enablement

Total bookings mix































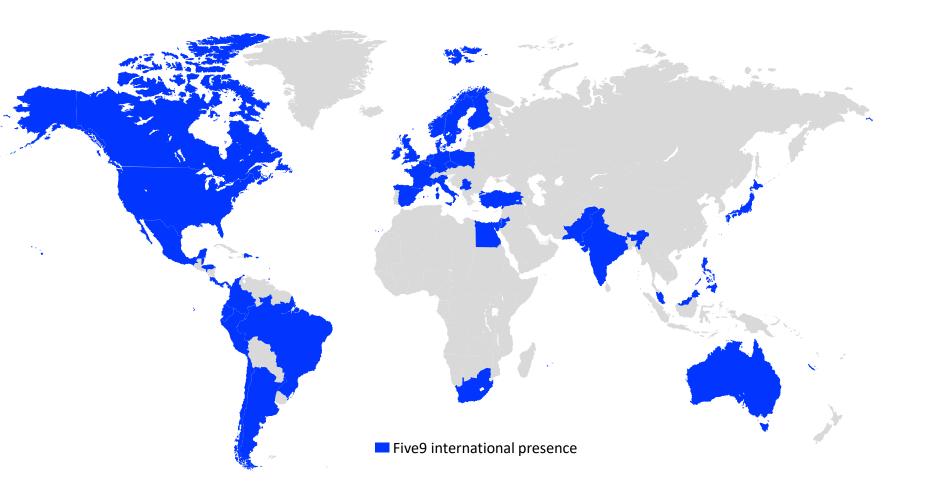






5 Increasing International Footprint

- Large, underpenetrated international opportunity
- Continue to make focused investments in Canada, LATAM and Western Europe
- Selectively invest in additional priority markets





Why We're Confident

Executing on our Enterprise strategy

Accelerating our reach and market share



Customer Panel: Delivering Measurable Value

Dan Burkland, President



Customer Panel

Ed Albrektsen

Director,
Vendor Solutions and Audit



Gina Wiley

Product Manager, Business Applications



Teddy Liaw





Powerful Financial Model

Barry Zwarenstein, CFO



Our Financial Commitments







Sustained 30s Enterprise subscription revenue growth Continuity of disciplined execution with frugality and pragmatism

Balance of top and bottom line



Strengthening Metrics...

IPO Q2'14	Today	Q3'19
-------------	-------	-------

27% 28% Consistent YoY revenue growth

(25%)19% **Expanding Adjusted EBITDA margin**

(27%)17% Increasing operating cash flow margin

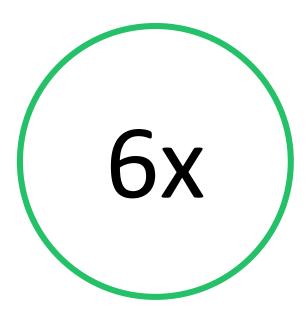


...Driven by Enterprise



Enterprise

Percent of LTM **Total Revenue**



Enterprise

LTV: CAC **Unit Economics**



Consistent Enterprise Subscription Growth

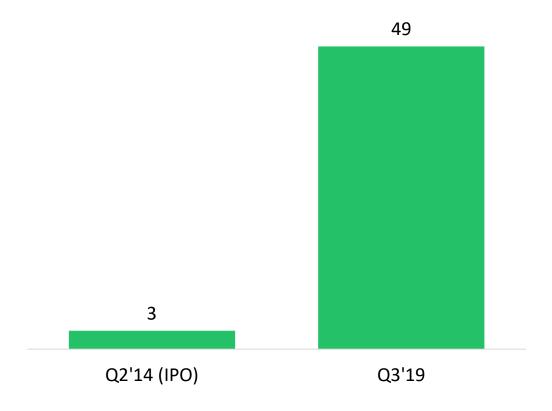
43% 37% 36% 36% 35% Q3'15 Q3'16 Q3'17 Q3'18 Q3'19

Enterprise **Subscription** Now a Majority of Revenue





Increasing Number of \$1M+ ARR Customers



Number of \$1M+ ARR customers

Average Size of \$1M+ ARR Customers

\$10B Annual revenue

12,000 Employees

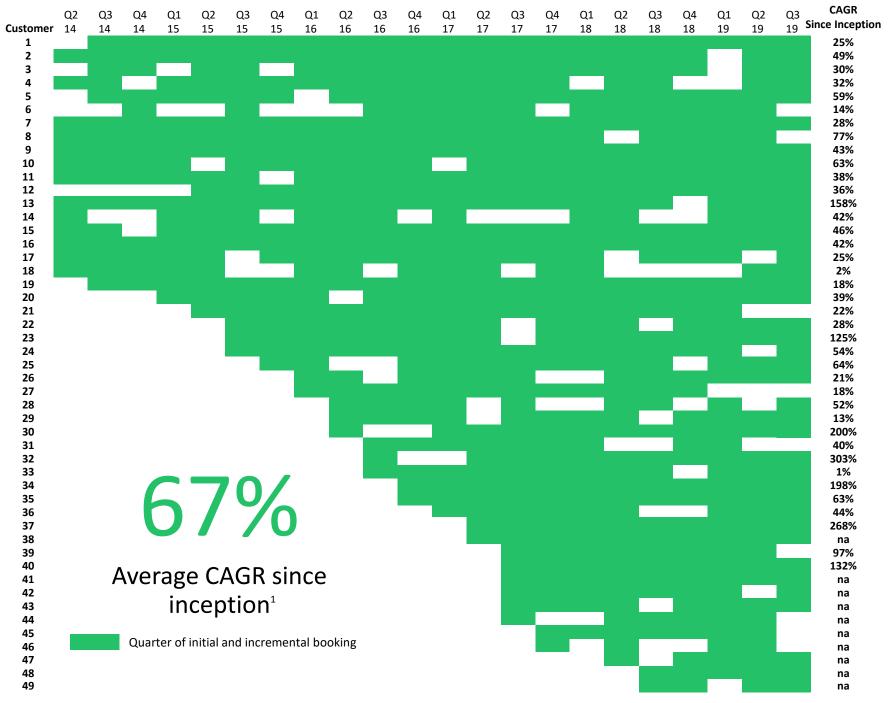


What About Growth in the Installed Base?

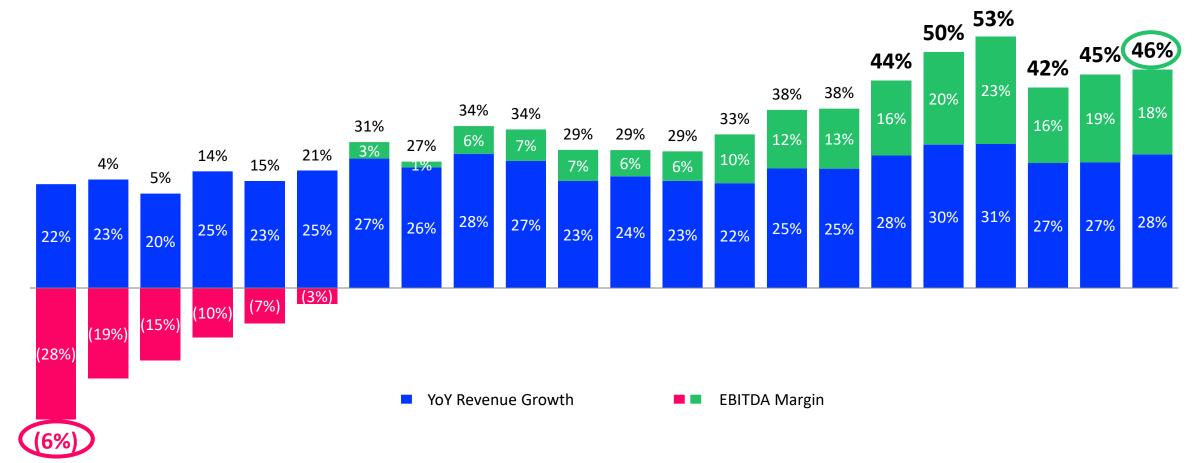
New logo growth still biggest source of revenue, but growth in installed base becoming increasingly important



\$1M+ ARR customers expand nearly every quarter



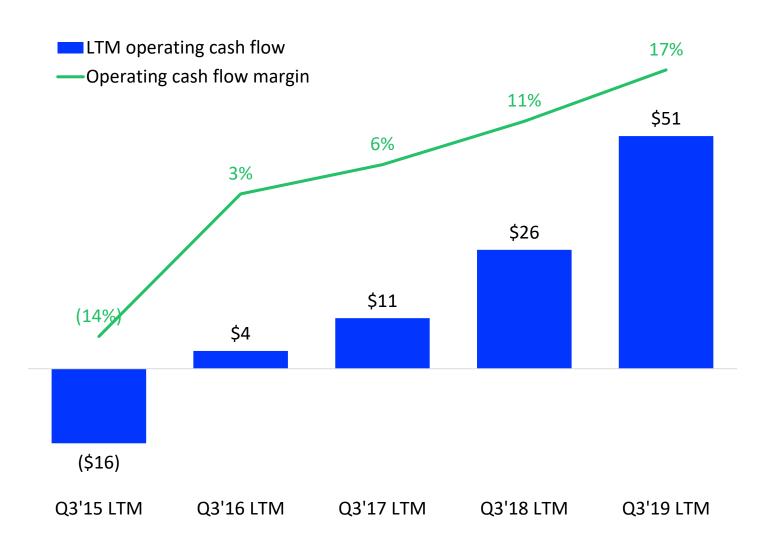
Exceeding "Rule of 40" Despite Increased Investments



Q2'14 Q3'14 Q4'14 Q1'15 Q2'15 Q3'15 Q4'15 Q1'16 Q2'16 Q3'16 Q4'16 Q1'17 Q2'17 Q3'17 Q4'17 Q1'18 Q2'18 Q3'18 Q4'18 Q1'19 Q2'19 Q3'19



Consistently Generating Strong Operating Cash Flow



15th

Consecutive quarter of positive operating cash flow

31
Days Sales Outstanding

Long-Term Model

Non-GAAP

% of Revenue	2014	2015	2016	2017	2018	Q3'19	
Adj. Gross Margin	53%	59%	62%	63%	64%	64%	Subscription / PS mincreasing subscrip
S&M	35%	31%	31%	31%	25%	26%	Continue to invest revenue growth
R&D	19%	16%	13%	12%	11%	11%	Current acceleratio term leverage
G&A	21%	16%	13%	11%	10%	9%	Economies of scale
Adj. EBITDA	(22%)	(4%)	5%	9%	18%	18%	

	Long-term model
Subscription / PS margin expansion and increasing subscription mix	70%+
Continue to invest in GTM in line with revenue growth	26% – 30%
Current acceleration offset by long- term leverage	8% – 10%
Economies of scale	5% – 7%
	27%+

Based on ASC 605 Based on ASC 606



1 Large Market Opportunity



Strong

2 Execution
Engine

Proven leadership team

Differentiated strategy

Market-winning product

Robust cloud platform

Strong go-to-market machine

3 Delivering Growth and Profitability



Five9 Leadership Team



Rowan Trollope
CEO
CISCO Symantec.



David Pickering

EVP, Engineering

Intuit ORACLE



Dan Burkland
President
CISCO

CEOTEL



Scott Welch
EVP, Cloud Operations

in inContact. McLeodUSA



Barry Zwarenstein
CFO
VeriFone.



Anand Chandrasekaran

EVP, Product Management

Snapdeal



Jonathan Rosenberg
CTO and Head of AI
CISCO Skype



James Doran
EVP, Strategy & Operations
CISCO Symantec.



Ryan Kam
CMO
APPDYNAMICS Salesford



Tricia Yankovich SVP, Human Resources





Q&A





Thank you.

Five9 Financial Analyst Day 2019



Appendix



GAAP to Adjusted Gross Profit Reconciliation

Q2'14 - Q3'19

											Quarte	· Ended										
	Q2'14	Q3'14	Q4'14	Q1'15	Q2'15	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19
GAAP gross profit	11,216	12,365	13,734	15,496	16,004	17,475	20,398	21,405	22,122	23,192	28,437	27,043	27,454	29,584	33,040	34,203	36,306	39,125	43,996	43,687	46,188	49,297
% GAAP gross margin	45.4%	47.8%	48.6%	51.2%	52.9%	54.1%	56.6%	56.3%	56.9%	56.6%	64.3%	57.5%	57.5%	59.1%	59.6%	58.1%	59.4%	59.9%	60.8%	58.6%	59.6%	58.8%
Depreciation & amortization	1,373	1,272	1,291	1,439	1,558	1,470	1,483	1,680	1,616	1,668	1,608	1,576	1,716	1,397	1,611	1,794	1,864	2,021	2,129	2,366	2,504	2,602
Stock-based compensation	121	158	176	188	218	233	227	265	329	357	424	434	575	599	594	678	853	860	942	1,229	1,658	1,702
Reversal of accrued federal fees	_	_	_	_	_	_	_	_	_	_	(3,114)	_	_	_	_	_	_	_	_	_	_	_
Out of period adj. for accrued federal fees	_	_	235	_	-	-	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Adjusted gross profit	12,710	13,795	15,436	17,123	17,780	19,178	22,108	23,350	24,067	25,217	27,355	29,053	29,745	31,580	35,245	36,675	39,023	42,006	47,067	47,282	50,350	53,601
% adjusted gross margin	51.5%	53.3%	54.6%	56.6%	58.7%	59.4%	61.4%	61.4%	61.9%	61.5%	61.9%	61.8%	62.3%	63.1%	63.6%	62.3%	63.8%	64.3%	65.1%	63.4%	65.0%	64.0%



GAAP to Adjusted Gross Profit Reconciliation

2014 - 2018

			Year Ended		
	2014	2015	2016	2017	2018
GAAP gross profit	48,441	69,373	95,156	117,121	153,630
% GAAP gross margin	47.0%	53.8%	58.7%	58.5%	59.6%
Depreciation & amortization	5,138	5,950	6,573	6,300	7,808
Stock-based compensation	542	866	1,375	2,202	3,333
Reversal of accrued federal fees	_	_	(3,114)	_	_
Out of period adj. for accrued federal fees	235	_	_	_	_
Adjusted gross profit	54,356	76,189	99,990	125,623	164,771
% adjusted gross margin	52.7%	59.1%	61.7%	62.7%	63.9%



GAAP Net Inc. (Loss) to Adj. EBITDA Reconciliation

Q3'13 - Q3'19

												Ouz	arter Ende	ed											
	Q3'13	Q4'13	Q1'14	Q2'14	Q3'14	Q4'14	Q1'15	Q2'15	Q3'15	Q4'15	Q1'16	Q2'16		Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19
GAAP net income (loss)	(7,735)	(8,632)	(8,320)	(8,659)	(11,435)	(9,372)	(8,903)	(7,369)	(6,048)	(3,518)	(4,911)	(3,468)	(3,890)	409	(5,255)	(4,007)	924	(631)	(607)	(2,042)	(1,305)	3,733	(1,924)	(1,860)	(1,604)
Non-GAAP adjustments:																									
Depreciation and amortization	1,063	1,513	1,592	1,699	1,567	1,605	1,775	1,910	1,840	1,863	2,103	2,060	2,140	2,086	2,095	2,270	1,881	2,068	2,320	2,449	2,667	2,838	3,192	3,361	3,497
Stock-based compensation	458	923	1,196	1,723	1,877	1,957	2,235	1,830	1,945	1,720	1,994	2,414	2,519	2,716	3,129	3,854	3,720	4,640	5,325	6,797	8,869	7,493	8,686	10,436	11,075
Interest expense	273	414	778	1,092	1,116	1,175	1,139	1,155	1,235	1,198	1,199	1,197	961	869	882	888	865	836	810	2,378	3,595	3,462	3,396	3,406	3,486
Interest income and other	15	(10)	(32)	28	(95)	(146)	(2)	49	(119)	(28)	45	33	(12)	(54)	(118)	(90)	(118)	(164)	(398)	(206)	(1,352)	(1,359)	(1,745)	(1,490)	(1,460)
Provision for (benefit from) income taxes	45	1	27	12	13	33	18	(20)	50	13	28	42	(2)	(14)	49	50	43	126	45	64	41	150	(49)	29	50
Extinguishment of debt	_	_	_	_	_	_	_	_	_	_	_	_	1,026	_	_	_	_	_	_	_	_	_	_	_	_
Reversal of accrued federal fees	_	_	_	_	_	_	_	_	_	_	_	_	_	(3,114)	_	_	_	_	_	_	_	_	_	_	_
Legal settlement	_	_	_	_	_	_	_	_	_	_	_	_	_	_	1,700	_	_	_	_	_	_	_	_	420	_
Legal and indemnification fees related to settlement	_	_	_	_	_	_	_	_	_	_	_	_	_	_	135	_	_	_	_	241	258	93	292	64	_
Change in fair value of convertible preferred and common stock warrant liabilities	622	694	(1,745)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Reversal of contingent sales tax liability (G&A)	_	_	_	(2,766)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Reversal of interest and penalties on accrued federal fees (G&A)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	(2,133)	_	_	_	_	_	_	_	_
Accrued FCC charge (G&A)	_	_	_	_	2,000	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Out of period adj. for accrued federal fees (COR)	_	_	_	_	_	235	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Out of period adj. for sales tax liability (G&A)	_	_	_	_	_	183	575	190	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Adjusted EBITDA	(5,259)	(5,097)	(6,504)	(6,871)	(4,957)	(4,330)	(3,163)	(2,255)	(1,097)	1,248	458	2,278	2,742	2,898	2,617	2,965	5,182	6,875	7,495	9,681	12,773	16,410	11,848	14,366	 15,044
% adjusted EBITDA margin	(24.9%)	(21.6%)	(26.8%)	(27.8%)	(19.2%)	(15.3%)	(10.4%)	(7.4%)	(3.4%)	3.5%	1.2%	5.9%	6.7%	6.6%	5.6%	6.2%	10.3%	12.4%	12.7%	15.8%	19.6%	22.7%	15.9%	18.6%	18.0%



GAAP Net Loss to Adjusted EBITDA Reconciliation

2014 - 2018

			Year Ended		
	2014	2015	2016	2017	2018
GAAP net income (loss)	(\$37,786)	(\$25,838)	(\$11,860)	(\$8,969)	(\$221)
Non-GAAP adjustments:					
Depreciation and amortization	6,463	7,388	8,390	8,314	10,274
Stock-based compensation	6,753	7,730	9,643	15,343	28,484
Interest expense	4,161	4,727	4,226	3,471	10,245
Interest income and other	(245)	(100)	13	(490)	(3,315)
Provision for (benefit from) income taxes	85	61	54	268	300
Extinguishment of debt	_	_	1,026	_	_
Reversal of accrued federal fees	_	_	(3,114)	_	_
Legal settlement	_	_	_	1,700	_
Legal and indemnification fees related to settlement	_	_	_	135	592
Change in fair value of convertible preferred and common stock warrant liabilities	(1,745)	_	_	_	_
Reversal of contingent sales tax liability (G&A)	(2,766)	_	_	_	_
Reversal of interest and penalties on accrued federal fees (G&A)	_	_	_	(2,133)	_
Accrued FCC charge (G&A)	2,000	_	_	_	_
Out of period adj. for accrued federal fees (COR)	235	_	_	_	_
Out of period adj. for sales tax liability (G&A)	183	765	_	_	_
Adjusted EBITDA	(\$22,662)	(\$5,267)	\$8,378	\$17,639	\$46,359
% adjusted EBITDA margin	(22.0%)	(4.1%)	5.2%	8.8%	18.0%



GAAP to Non-GAAP COR and OpEx Reconciliation

Q2'14 - Q3'19

											Overter	Cadad										
	Q2'14	Q3'14	Q4'14	Q1'15	Q2'15	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Quarter Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19
GAAP COR	13,469	13,504	14,540	14,778	14,270	14,812	15,635	16,610	16,764	17,790	15,770	19,971	20,273	20,497	22,363	24,702	24,814	26,179	28,339	30,851	31,248	34,472
% of revenue	54.6%	52.2%	51.4%	48.8%	47.1%	45.9%	43.4%	43.7%	43.1%	43.4%	35.7%	42.5%	42.5%	40.9%	40.4%	41.9%	40.6%	40.1%	39.2%	41.4%	40.4%	41.2%
Depreciation & amortization	(1,373)	(1,272)	(1,291)	(1,439)	(1,558)	(1,470)	(1,483)	(1,680)	(1,616)	(1,668)	(1,608)	(1,576)	(1,716)	(1,397)	(1,611)	(1,794)	(1,864)	(2,021)	(2,129)	(2,366)	(2,504)	(2,602)
Stock-based compensation	(121)	(158)	(176)	(188)	(218)	(233)	(227)	(265)	(329)	(357)	(424)	(434)	(575)	(599)	(594)	(678)	(853)	(860)	(942)	(1,229)	(1,658)	(1,702)
Reversal of accrued federal fees	_	_	_	_	_	_	_	_	_	_	3,114	_	_	_	_	_	_	_	_	_	_	_
Out of period adj. for accrued federal fees	_	_	(235)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Non-GAAP COR	11,975	12,074	12,838	13,151	12,494	13,109	13,925	14,665	14,819	15,765	16,852	17,961	17,982	18,501	20,158	22,230	22,097	23,298	25,268	27,256	27,086	30,168
% of revenue	48.5%	46.7%	45.4%	43.4%	41.3%	40.6%	38.6%	38.6%	38.1%	38.5%	38.1%	38.2%	37.7%	36.9%	36.4%	37.7%	36.2%	35.7%	34.9%	36.6%	35.0%	36.0%
GAAP R&D	5,554	5,503	5,828	6,038	5,568	5,473	5,580	5,802	5,799	6,041	6,236	6,847	6,836	6,689	6,748	7,772	8,367	9,582	8,451	10,546	10,811	11,665
% of revenue	22.5%	21.3%	20.6%	19.9%	18.4%	17.0%	15.5%	15.3%	14.9%	14.7%	14.1%	14.6%	14.3%	13.4%	12.2%	13.2%	13.7%	14.7%	11.7%	14.1%	14.0%	13.9%
Depreciation & amortization	(50)	(58)	(75)	(87)	(102)	(126)	(140)	(148)	(161)	(204)	(224)	(206)	(237)	(182)	(170)	(194)	(233)	(278)	(331)	(440)	(450)	(450)
Stock-based compensation	(471)	(583)	(527)	(574)	(340)	(475)	(401)	(435)	(528)	(547)	(549)	(637)	(801)	(797)	(807)	(877)	(1,064)	(2,352)	(1,010)	(1,470)	(1,907)	(2,022)
Non-GAAP R&D	5,033	4,862	5,226	5,377	5,126	4,872	5,039	5,219	5,110	5,290	5,463	6,004	5,798	5,710	5,771	6,701	7,070	6,952	7,110	8,636	8,454	9,193
% of revenue	20.4%	18.8%	18.5%	17.8%	16.9%	15.1%	14.0%	13.7%	13.1%	12.9%	12.4%	12.8%	12.1%	11.4%	10.4%	11.4%	11.6%	10.6%	9.8%	11.6%	10.9%	11.0%
GAAP S&M	9,674	9,296	9,453	9,931	10,594	10,797	10,720	12,706	12,637	12,925	14,480	15,778	16,932	16,502	17,358	17,478	17,912	17,818	18,793	21,701	23,250	25,014
% of revenue	39.2%	35.9%	33.4%	32.8%	35.0%	33.4%	29.8%	33.4%	32.5%	31.5%	32.8%	33.6%	35.5%	33.0%	31.3%	29.7%	29.3%	27.3%	26.0%	29.1%	30.0%	29.9%
Depreciation & amortization	(48)	(50)	(50)	(49)	(51)	(52)	(54)	(53)	(54)	(56)	(58)	(30)	(30)	(30)	(30)	(29)	(30)	(30)	(6)	(1)	(1)	(2)
Stock-based compensation	(368)	(361)	(455)	(524)	(458)	(448)	(370)	(434)	(544)	(626)	(759)	(928)	(1,224)	(1,084)	(1,128)	(1,362)	(1,585)	(1,613)	(1,747)	(2,249)	(2,749)	(3,017)
Non-GAAP S&M	9,258	8,885	8,948	9,358	10,085	10,297	10,296	12,219	12,039	12,243	13,663	14,820	15,678	15,388	16,200	16,087	16,297	16,175	17,040	19,451	20,500	21,995
% of revenue	37.5%	34.3%	31.6%	30.9%	33.3%	31.9%	28.6%	32.1%	31.0%	29.9%	30.9%	31.5%	32.8%	30.7%	29.2%	27.3%	26.7%	24.8%	23.6%	26.1%	26.5%	26.3%
GAAP G&A	3,515	7,967	6,763	7,275	6,027	6,087	6,433	6,536	5,882	6,143	6,511	8,860	6,845	4,679	8,767	9,103	9,833	10,746	10,766	11,762	12,042	12,146
% of revenue	14.2%	30.8%	23.9%	24.0%	19.9%	18.9%	17.9%	17.2%	15.1%	15.0%	14.7%	18.8%	14.3%	9.3%	15.8%	15.5%	16.1%	16.5%	14.9%	15.8%	15.6%	14.5%
Depreciation & amortization	(228)	(187)	(189)	(200)	(199)	(192)	(186)	(222)	(229)	(212)	(196)	(283)	(287)	(272)	(257)	(303)	(322)	(338)	(372)	(385)	(406)	(443)
Stock-based compensation	(763)	(775)	(799)	(949)	(814)	(789)	(722)	(860)	(1,013)	(989)	(984)	(1,130)	(1,254)	(1,240)	(2,111)	(2,408)	(3,295)	(4,044)	(3,794)	(3,738)	(4,122)	(4,334)
Legal settlement	_	_	_	_	_	_	_	_	_	_	_	(1,700)	_	_	_	_	_	_	_	_	(420)	_
Legal and indemnification fees related to settlement	_	_	_	_	_	_	_	_	_	_	_	(135)	_	_	_	_	(241)	(258)	(93)	(292)	(64)	_
Reversal of contingent sales tax liability	2,766	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Reversal of interest & penalties on accrued federal fees	_	_	_	_	_	_	_	_	_	_	_	_	_	2,133	_	_	_	_	_	_	_	_
Accrued FCC charge	_	(2,000)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Out of period adj. for sales tax liability	_	_	(183)	(575)	(190)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Non-GAAP G&A	5,290	5,005	5,592	5,551	4,824	5,106	5,525	5,454	4,640	4,942	5,331	5,612	5,304	5,300	6,399	6,392	5,975	6,106	6,507	7,347	7,030	7,369
% of revenue	21.4%	19.3%	19.8%	18.3%	15.9%	15.8%	15.3%	14.3%	11.9%	12.1%	12.1%	11.9%	11.1%	10.6%	11.5%	10.9%	9.8%	9.4%	9.0%	9.9%	9.1%	8.8%



GAAP to Non-GAAP COR and OpEx Reconciliation

2014 - 2018

			Voca Forded		
	2014	2015	Year Ended 2016	2017	2018
GAAP COR	\$54,661	\$59,495	\$66,934	\$83,104	\$104,034
% of revenue	53.0%	46.2%	41.3%	41.5%	40.4%
Depreciation & amortization	(5,138)	(5,950)	(6,573)	(6,300)	(7,808)
Stock-based compensation	(542)	(866)	(1,375)	(2,202)	(3,333)
Reversal of accrued federal fees		· _ ′	3,114	· · ·	
Out of period adj. for accrued federal fees	(235)	_	_	_	_
Non-GAAP COR	\$48,746	\$52,679	\$62,100	\$74,602	\$92,893
% of revenue	47.3%	40.9%	38.3%	37.3%	36.1%
GAAP R&D	\$22,110	\$22,659	\$23,878	\$27,120	\$34,172
% of revenue	21.4%	17.6%	14.7%	13.5%	13.3%
Depreciation & amortization	(229)	(455)	(737)	(795)	(1,036)
Stock-based compensation	(1,931)	(1,790)	(2,059)	(3,042)	(5,303)
Non-GAAP R&D	\$19,950	\$20,414	\$21,082	\$23,283	\$27,833
% of revenue	19.3%	15.8%	13.0%	11.6%	10.8%
GAAP S&M	\$37,445	\$42,042	\$52,748	\$66,570	\$72,001
% of revenue	36.3%	32.6%	32.5%	33.2%	27.9%
Depreciation & amortization	(196)	(206)	(221)	(120)	(95)
Stock-based compensation	(1,510)	(1,800)	(2,363)	(4,364)	(6,307)
Non-GAAP S&M	\$35,739	\$40,036	\$50,164	\$62,086	\$65,599
% of revenue	34.7%	31.1%	30.9%	31.0%	25.5%
GAAP G&A	\$24,416	\$25,822	\$25,072	\$29,151	\$40,448
% of revenue	23.7%	20.0%	15.5%	14.6%	15.7%
Depreciation & amortization	(900)	(777)	(859)	(1,099)	(1,335)
Stock-based compensation	(2,770)	(3,274)	(3,846)	(5,735)	(13,541)
Legal settlement	_	_	_	(1,700)	_
Legal and indemnification fees related to settlement	_	_	_	(135)	(592)
Reversal of contingent sales tax liability	2,766	_	_	_	_
Reversal of interest & penalties on accrued federal fees	_	_	_	2,133	_
Accrued FCC charge	(2,000)	_	_	_	_
Out of period adj. for sales tax liability	(183)	(765)	_	_	_
Non-GAAP G&A	\$21,329	\$21,006	\$20,367	\$22,615	\$24,980
% of revenue	20.7%	16.3%	12.6%	11.3%	9.7%

