Welcome, Robert M Ross

| Procurement | Budgeting | Accounts Receivable | Accounts Payable |

Solicitation Response(SR) | **Dept:** 0947 | **ID:** ESR08192200000000943 | **Ver.:** 1 | **Function:** New | **Phase:** Final | ▼ | Modified by batch , 08/23/2022

Header 📎 1

List View

| **General Information** | Contact | Default Values | Discount | Document Information | Clarification Request |

Procurement Folder: 1077255

Procurement Type: Central Master Agreement

Vendor ID: VS0000041206 ⬆

Legal Name: VISION POINT SYSTEMS INC

Alias/DBA:

Total Bid: $54,528.35

Response Date: 08/23/2022 📅

Response Time: 10:44

Responded By User ID: visionpoint ⬆

First Name: Vi

Last Name: Nguyen

Email: vnguyen@visionpointsys

Phone: 7036524828

SO Doc Code: CRFQ

SO Dept: 0947

SO Doc ID: ERP2300000001

Published Date: 8/16/22

Close Date: 8/23/22

Close Time: 13:30

Status: Closed

Solicitation Description: Addendum No. 1 Hosted Call Center Operations

Total of Header Attachments: 1

Total of All Attachments: 1

Proc Folder:	1077255
Solicitation Description:	Addendum No. 1 Hosted Call Center Operations
Proc Type:	Central Master Agreement

Solicitation Closes	**Solicitation Response**	**Version**
2022-08-23 13:30	SR 0947 ESR08192200000000943	1

VENDOR
VS0000041206
VISION POINT SYSTEMS INC

Solicitation Number:	CRFQ 0947 ERP2300000001		
Total Bid:	54528.3499999999985448084 7716 **Response Date:** 2022-08-23	**Response Time:**	10:44:23
Comments:			

FOR INFORMATION CONTACT THE BUYER
Toby L Welch
(304) 558-8802
toby.l.welch@wv.gov

Vendor
Signature X   **FEIN#**   **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Toll Free Routing Plan (per line, per month)	2.00000	EA	2.000000	4.00

Comm Code	Manufacturer	Specification	Model #
81161700			

Commodity Line Comments: Payable to Twilio

Extended Description:

Specification 4.1.1.4
Toll Free Routing Plan (per line, per month)
(Quantities are estimated on a monthly basis)
Enter Unit Price per each

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Toll Free Calls (per minute)	6075.0000	EA	0.018000	109.35

Comm Code	Manufacturer	Specification	Model #
81161700			

Commodity Line Comments: Payable to Twilio
Pricing is $0.018 per minute for inbound toll free calls.
Outbound calls on toll free numbers are $0.009 per minute.

Extended Description:

Specification 4.1.1.4
Toll Free Calls (per minute)
(Quantities are estimated on a monthly basis)
Enter Unit Price per each

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	IP Call Center (per month)	1.00000	EA	0.000000	0.00

Comm Code	Manufacturer	Specification	Model #
81161700			

Commodity Line Comments: There is no fee for platform

Extended Description:

Specification 4.1.1.6
IP Call Center Access via web page
(Quantities are estimated on a monthly basis)
Enter Unit Price per each

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Conversion of existing call routing scripts (one-time)	1.00000	EA	50000.000000	50000.00

Comm Code	Manufacturer	Specification	Model #
81161700			

Commodity Line Comments: This is a one time fixed fee for Professional services.
Bid may be revised with additional specifications. Not enough information provided in RFP to quote accurately

Extended Description:

Specification 4.1.1.10
Conversion of up to 50 existing scripts for call routing purposes
(Quantities are estimated on a monthly basis)
Enter Unit Price per each

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
5	Voice Recording (per agent, per month)	6.00000	EA	2.500000	15.00

Comm Code	Manufacturer	Specification	Model #
81161700			

Commodity Line Comments: Payable to Twilio
Recording is billed per minute. First 10,000 minutes in each account free.
Estmated at 5000 minutes per agent generated per month. 0.0005 per minute
Amount is cumulative unless recordings are deleted - so first month $2.50, second month $5.00, third month $7.50 and so on.

Extended Description:

Specification 4.1.1.12
Voice Recording (per agent, per month)
1GB Cloud Storage included
(Quantities are estimated on a monthly basis)
Enter Unit Price per each

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
6	Voice Recording Storage (per extra GB, per month)	1.00000	EA		

Comm Code	Manufacturer	Specification	Model #
81161700			

Commodity Line Comments: Payable to Twilio
See Line Item 5

Extended Description:

Specification 4.1.1.12
Voice Recording Storage (per extra GB, per month)
1GB Cloud Storage included
(Quantities are estimated on a monthly basis)
Enter Unit Price per each

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
7	Implementation and Training Costs	1.00000	EA	3500.000000	3500.00

Comm Code	Manufacturer	Specification	Model #
81111508			

Commodity Line Comments: Monthly Fee includes Initial Implementation, VPS Support Plan, Access to Twilio Support.
Assumes 1 year term.
Additional payment options are available to reduce monthly fee with up front lump sum implementation fee.

Extended Description:

Specification 4.1.1.17
Implementation and Training Costs
(Quantities are estimated on a monthly basis)
Enter monthly fee

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
8	Port Fee(s) for queue (per port, per month)	15.00000	EA	0.000000	0.00

Comm Code	Manufacturer	Specification	Model #
81111508			

Commodity Line Comments: No Fee for port/queue count with our solution. Unlimited queued calls.

Extended Description:

Specification 4.1.2
Port Fee(s) to allow for calls in queue.
(Quantities are estimated on a monthly basis)
Enter Unit Price per each

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
9	Unique Logged in User Fee (per user, per month)	6.00000	EA	150.000000	900.00

Comm Code	Manufacturer	Specification	Model #
81111508			

Commodity Line Comments: Payable To Twilio
price is per named agent per month for Twilio Flex

Extended Description:

Specification 4.1.2
Unique Logged in User Fee (per user, per month)
(Quantities are estimated on a monthly basis)
Enter Unit Price per each

Vision Point Systems

Point of Contact: Cory Hoffman

(540) 935-8857

choffman@visionpointsystems.com

August 23rd, 2022

Proposal to: **West Virginia Purchasing Division**

                        for WV Enterprise Resource Planning Board

Proposal for: **Hosted Call Center Operations Services**

Technical Proposal

Document Authors: **Jim Schweitzer (VPS), Andrew Ramadan (VPS),**

Table of Contents

1.0 Executive Summary

Vision Point Systems (VPS) is pleased to present the following proposed solution to the West Virginia Purchasing Division on behalf of the WV Enterprise Resource Planning Board (WV ERPB) for the **Hosted Call Center Operations Services**. VPS is a Minority-Owned Small Business based in Northern Virginia. At the core of our solution is **Twilio Flex** and Twilio's industry-leading cloud communications platform. VPS has been a Twilio Systems Integrator Partner since 2013, having worked with Twilio Programmable Voice since 2011.

Over the course of this project, Team VPS will demonstrate why this solution will fit the organizational needs of WV ERPB. Specifically, the combined solution featuring VPS' implementation team and Twilio's platform will provide WV ERPB with the transformational foundation for operational excellence for years to come.

Twilio Flex is the programmable contact center platform that gives businesses control to build and improve customer and agent experiences using the creativity of developers, Application Programming Interface (API)-based programmability, and built-in global connectivity.

Twilio Flex represents a new approach to enterprise cloud software. Eliminating the decision around "buy vs. build", the Twilio model of the application platform allows developers to build, deploy, and test agent and customer experiences using Twilio APIs for universal access to data, ReactJS for a modern agent User Experience, and visual workflow builders for complete control of the business process.

The Flex solution is designed for rapid deployment, which allows the customer flexibility to incrementally enable features as necessary for a faster go-live. Additionally, the operating expense (OPEX) pricing model allows organizations to make adjustments for managing a budget. The solution is scalable, adaptable, and secure - meeting the needs of the WV ERPB Hosted Call Center Operations Services project.

Government agencies across the country - including the State of New Mexico, the State of Texas, the City of Pittsburgh, and the City of Chicago - have adopted the Twilio Flex platform for the enablement of their Contact Tracing Call Centers. Over **25 million** voice calls and SMS messages have been processed and transmitted using the Twilio Flex Platform.

Twilio Flex delivers complete control to design and build customer experiences and apps using API-based programmability and breadth of channels.

Twilio Flex improves contact center productivity by integrating the data and apps that agents and supervisors need into a single user interface.

Twilio Flex enables faster feature delivery with tools developers are already familiar with, including React JavaScript SDKs, Twilio APIs, and visual workflow builders.

Twilio Flex is a Cloud-based Contact Center as a Service platform designed to be customized through programmability. The solution being presented by VPS, however, featuring Twilio Flex and certified add-ons will be able to meet the technical requirements set out by WV ERPB using out-of-the-box features, basic configuration, or are covered by VPS' standard support plan. Items requiring custom development will generally be limited to those that cover specific operations or business rules of WV ERPB, such as transfers and workforce management. VPS' solution will be able to get you up and running quickly at scale.

Our project plan is to launch the system in one month with text and chat functionality, then finish voice functionality after another month of delivery time. We will be able to realize the plan with a team of 2 people. We are confident that VPS's expert implementation staff, and the world-class platforms we are proposing, will achieve WV ERPB's vision for contact center excellence.

2.0 Quantity and Quality of Relevant Experience

2.1.   Experience with Similar Projects

Team VPS has a unique history well suited to the WV ERPB Hosted Call Center Operations Services project. VPS is a consulting company first, developing tailored solutions to clients with unique challenges. Historically, VPS has its origins in the telephony and contact center space.

In the early 2000's VPS was building and integrating custom IVR solutions around traditional carrier services and proprietary PBXs (like Avaya and Nortel). In the NYC metro area, we supported Celgene Corporation in Summit, NJ (since acquired by Bristol-Myers Squibb) and Empire Merchants, in Brooklyn and Queens, NY.

Those traditional hardware-based PBXs, while powerful, were challenging to support and were becoming obsolete even in the 2000s. VPS was an early adopter of Twilio, as we looked for alternative solutions to help customers migrate to cloud-based architectures.

Our work in the contact center integration space led us to develop our VoiceVision consulting offering, designed to help organizations leverage and optimize their existing telephony investments and make strategic decisions with IT resources to adapt to the constantly shifting technology landscape.

As Twilio has grown as a platform, VPS has grown with it, deploying more IVR and contact center systems every year using Twilio Studio and Twilio Flex. The functionality formerly available only to organizations with carrier-grade telephony hardware in their server rooms is now available on an as-needed basis from the Twilio platform to organizations of any size.

VPS has worked with clients ranging from startup to enterprise, commercial and non-profit, and brings the skills to the table to manage projects large and small according to the software development lifecycle (SDLC).

Just a few of our recent projects include:

NON-PROFIT
- Children's Aid of New York, Bronx Impact Hotline
- WhyHunger.org, WhyHunger Hotline
- TrekMedics International, Beacon App
- Families First of Indiana
- Feminist Frequency, Games and Online Harrassment Hotline
- Give Us the Floor, Salesforce Integration
- Tennessee Disability Coalition

COMMERCIAL and GOVERNMENT
- SunWest Mortgage Company
- City of Brampton, Ontario
- Kapsch
- TrueAccord
- Juvare
- Centers Health Care
- scPharmaceuticals
- REVV, LLC
- The Mechanical Licensing Collective
- City of Pittsburgh
- Atomic Credit Union (OH)
- New Orleans Public Schools

Featured Project - Kapsch TrafficCom RCTC/SRTA

May 2019 - Support Ongoing

Since 2019, VPS has worked with Kapsch to modernize the IVR systems that support automating user self-service for Georgia's State Road and Tollway Authority (SRTA) Peach Pass and Riverside County Transportation Commission (RCTC) Riverside Express. These two distinct RFID toll payment systems (similar to E-ZPASS) are supported by IVR applications built on the Twilio platform, and provide IVR customer self-service for thousands of users daily. The Twilio front end provides multilingual service using text-to-speech and speech recognition technologies. The front-end UI integrates with data sources on the back end through API calls for account management and toll payment.

Vision Point Systems has been Kapsch's exclusive vendor for Twilio development and Flex implementation services. VPS provided a development team which at its peak consisted of 10 developers and QA staff. While SRTA and RCTC are two distinct agencies responsible for 2 different constituencies, VPS helped Kapsch to develop common programming and shared services that could be used to accelerate the development time for both systems. SRTA Peach pass went live in November 2020, and RCTC went live in February 2021. Together, both systems operate with over 100 agents.

The self-service IVR applications were built with Twilio Studio and support multilingual operation for account management functions such as secure payments, transponder management, and violations. The IVR integrates with custom back-office using Twilio Functions. The system employs advanced call routing and CTI functions such as screenpops and virtual hold within Twilio Flex. The system also contains advanced reporting capabilities running on Jasper Reports and Flex Insights.

Featured Project - The Mechanical Licensing Collective (MLC)

August 2021 - Support Ongoing

In 2021, VPS assisted The MLC with their call center operations. The MLC is a nonprofit organization that strives to ensure songwriters, composers, lyricists, and music publishers receive their mechanical royalties from streaming and download services in the U.S. accurately and on time. VPS took over this project from a different Twilio Partner that was struggling to put together development resources with the skills to properly implement the system. As a result, the project was quickly exceeding the intended timeline and budget. VPS was able to correct the project's course and the call center went live in November. The MLC's call center integrates with HubSpot for their ticketing system, and automatically generates the tickets within the Twilio Flex platform. Additionally, the contact center facilitates many different agent attributes, with some calls triaged to agents based on different languages, and others routed to agents to handle challenging cases.

Featured Project - WhyHunger

October 2020 - Support Ongoing

In 2020, VPS contracted with WhyHunger, a non-profit organization based in New York City. WhyHunger works to connect people to nutritious and affordable food through the most comprehensive database of emergency food access organizations in the U.S. WhyHunger also operates Hungerthon, an annual national food drive campaign with high visibility through celebrity endorsers. VPS was selected to replace and upgrade WhyHunger's contact center infrastructure. Over the course of this project, VPS was able to implement Twilio Flex to provide a modern and flexible platform. Some of the features of WhyHunger's system include:

- Ability to support temporary major surge in traffic and agent headcount during Hungerthon
- Dynamic API-driven lookups of food banks in callers' local areas
- Ability for agents to seamlessly communicate with callers over SMS at the end of a call session
- Custom gathering of in-call metrics and reporting

Featured Project - Maximus - Centers for Disease Control (CDC) COVID-19 Vaccines.gov Campaign

May 2021 - Support Ongoing

During the pandemic, the whole nation has pitched in to defeat Covid-19. VPS is assisting Maximus Federal with technical development for an application that supports the CDC's COVID-19 Vaccine Outreach program via SMS and WhatsApp. Using Twilio Notify, VPS and the CDC built a system that can send over 500,000 bulk messages in a single day. This application empowers users to find nearby vaccination locations to get quickly immunized. Users provide their zip code location, and the system will respond with the closest location to get a vaccination. In an effort to meet users on the modes they use, VPS assisted the CDC in transforming their current system to an SMS based system. The system's ability to handle high-volume through a short code also frees up staff to focus on outcomes. Additionally, using WhatsApp allows the CDC to reach people with non-United States phone numbers, which has been instrumental in helping reach non-citizens residing in the United States.

Featured Project - Feminist Frequency, Games and Online Harrassment Hotline

June 2020 - July 2020

In 2020, VPS built the Games and Online Harrassment Hotline for the group Feminist Frequency, an organization dedicated to ending abuse in the games industry. Powered by Twilio Flex, the Games and Online Harassment Hotline is a confidential, SMS text-based, emotional support line for people who make and play games. Texter's information is anonymized to help encourage people to use the hotline by protecting their personal identity. The hotline also contains an after call survey for Feminist Frequency to record demographic data about the contacts to help analyze their affected audience better. Agents have the ability to schedule an outbound message to someone who texted into the hotline, in case they'd like to reach out for a wellness check. It's critical that no calls be missed, so if a call comes in after hours an SMS chatbot will collect caller information so an agent can follow up during business hours.

3.0 Organizational Capability

Vision Point Systems, Inc. was incorporated in October, 2002 as an IVR and contact center application development firm focusing on highly regulated industries. VPS is a privately held company (Subchapter-S corporation) headquartered in Fairfax, Virginia. It currently employs 140 professionals on the East and West coasts plus Hawaii. VPS also operates in the United Kingdom through its wholly owned subsidiary Vision Point Systems Limited, headquartered in London. VPS is a minority-owned enterprise.

Among the first projects VPS was involved with was the automation of Celgene Corporation's System for Thalidomide Education and Prescribing Safety (S.T.E.P.S.®). The S.T.E.P.S.® system administered surveys through an inbound IVR application whereby patients, prescribers (doctors and nurse practitioners), and pharmacies enter responses regarding the patients' adherence to Celgene's guidelines for Thalomid ® therapy to determine if a dispense of Thalidomide should occur. VPS developed this IVR system as well as the computer telephony integration (CTI) application utilizing Avaya's ASAI interface for their S8700 PBX. This enabled screenpops for agent desktop applications in their medical information and customer service call center in Bridgewater and later Summit, NJ. Given the highly regulated nature of Thalomid ® (Celgene's trade name for Thalidomide), VPS developed a highly mature set of processes to manage the entire SDLC. VPS since then adopted Agile methodology in 2012, and have performed most projects using this approach.

In 2005, VPS won its first contract with the US Department of the Navy. Contracts with the Navy have been cost-plus type, where a mature accounting system and processes were a strict requirement to ensure maximum value to the American taxpayer. VPS has undergone accounting audits by the Defense Contract Audit Agency every year since, where the scope of the audits involved analysis of overhead, fringe, and direct costs to determine fully burdened labor rates charged to the customer. In relation to these contracts, VPS was granted a Facility Clearance by the US Department of Defense. This allows VPS to hold its employees' security clearances along with adherence to information security reviews and audits. VPS currently employs professionals who have government (Civilian and DoD) clearances ranging from Public Trust to Secret.

In 2017, VPS began serving the needs of financial services companies. As a requirement of serving customers in this industry, VPS underwent a SOC 1, Type 2 audit by the accounting firm BDO in 2019. This further enhanced VPS' organization maturity in how it approaches IT physical as well as logical security.

In 2019, VPS began serving the needs of the Electricity and Gas industry in California. VPS is required to adhere to North American Electric Reliability Corporation (NERC) regulations applicable to vendors and suppliers. Strict background checks are required for this industry. VPS employees develop business process automation software to enable the customer to manage its operations and assets in compliance with NERC regulations.

VPS today is a mature company with a solid track record of sound management and steady, stable growth. We have a long track record of building and supporting applications that are mission critical in nature. As the above milestones demonstrate, VPS serves customers who have complex needs. VPS currently holds contract vehicles including a GSA MAS Information Technology contract (AKA IT Schedule 70) with the US Federal Government, manages a global workforce, and is in compliance with financial, HR, and security regulations in many of the most highly regulated industries in our economy.

With experience integrating traditional hardware-based IVR systems and call center hardware and software tools, to recent and ongoing implementation of cutting edge cloud telephony solutions being used globally, VPS is uniquely qualified and positioned to lead the effort to build, deploy, and support scalable technology for the WV ERPB in the decade to come.

3.1.   Company Information

Company Name	Vision Point Systems, Incorporated
Company Type	Corporation
Company Address	3951 Pender Dr. Suite 115 Fairfax, VA 22030
Primary Contact	Yong Lee, CEO 3951 Pender Dr Suite 115 Fairfax, VA 22030 (703) 652-4828
Year of Founding	2002

Years in Business	18
Years Providing Contact Center Services	18
Years Providing Twilio Services	10
Years Providing Twilio Flex Services	3

4.0 Approach and Methodology

4.1.   Overview of Solution

In the proposed solution, Team VPS will build a scalable platform for WV ERPB using the Twilio suite of cloud-based products. On this platform, Team VPS will build distinct applications using Twilio Studio and Twilio Flex to fit the voice needs of WV ERPB.

The new system will be scalable, available, and maintainable, all while providing improved service to end users.

Twilio Flex is a contact center platform that provides businesses and government organizations of all sizes with a framework that enables the creation of exceptional, omni-channel, live agent and self-service experiences for all customer interactions. Twilio Flex delivers increased control, allowing WV ERPB to design, build and test applications that fit within existing WV ERPB systems with API-based programmability and built-in world class connectivity.

Twilio Flex will improve contact center productivity for WV ERPB by accelerating customer resolutions and lowering cost per contact with a single user interface that leverages integrations and omni-channel self-service experiences.

Twilio Flex is underpinned by some key elements relevant to WV ERPB:

- **Twilio Platform** - A cloud-native library of API's that can be leveraged for customer engagement. From adding WhatsApp, to embedding video, to provisioning phone numbers or adding MFA, Twilio provides the functionality when it is needed.

- **Twilio Super Network** - An aggregation of thousands of carrier relationships and support systems that include Carrier Relations, Inventory Ops, Fraud Detection, Regulatory Compliance, Voice Ops, and many more that are dedicated to ensuring

connectivity and deliverability, offering traditional and modern scalable telecommunications connectivity.

- **"API DNA"** - Using industry standard web services protocols and methods, developers are armed with testing tools, documentation, code snippets, SDKs, effective logging and configurable alerting. API's are a part of Twilio's DNA, which will provide WV ERPB with more granular control over integrating to one/many cloud providers or web enabled on-premises systems.

- **Cloud Scalability** - Built atop Amazon Web Services (AWS), Twilio leverages many AWS services to deliver on-demand scale and reliability.

Agents can multi-task across voice and chat interactions with contextual customer data updating to reflect the interaction they are currently working on. Virtual agents can automate routine customer requests, or pass more complex inquiries to live agents, with context, for faster resolutions. In addition, only relevant data fields from multiple applications are surfaced in the single User Interface (UI), reducing handle times by as much as 30%.

Twilio Flex enables faster feature delivery with common tools including React SDKs, Twilio APIs and visual workflow builders. WV ERPB will be able to control the timing of feature delivery, free from dependency on vendor roadmaps.

Importantly, the proposed solution is a *best of breed*, multi-vendor solution, that consists of Twilio Flex as the contact center platform providing all the core capabilities that power the customer experience, agent experience and supervisor experience.

Flex is powered by the Twilio Super Network that will provide WV ERPB with quality and deliverability across channels and regions. Twilio's API DNA is a unique differentiator that will help unify contact center operations with whatever case management database platform WV ERPB chooses. Twilio is also able to integrate with key technologies that address specific needs such as customer authentication, fraud detection, PBX functionality, and multi-factor authentication, to name a few. Team VPS believes that the proposed solution will reduce the required number of vendors while increasing the overall value.

The following table addresses each requested feature and the approach we will take to address it.

Feature	Type	Twilio Product	Approach
General Application Requirements, Virtual Contact Center, or equal			
Automatic Call Routing	Out-of-box	TaskRouter	TaskRouter provides workflow configurations for skill-based routing. Additional routing determinations made by Twilio Studio such as time-of-day routing
Self-Service IVR	Customization	Twilio Studio	Twilio Studio provides a visual drag and drop IVR call flow builder.
Text-to-Speech	Platform	Twilio Programmable Voice	Twilio Supports Text-to-Speech as part of Twilio Studio
Transfer Toll-Free Numbers	Platform	Twilio Platform	Twilio's virtual phone numbers give you instant access to local, national, mobile, and toll-free phone numbers in over 100 countries for your voice call and messaging applications. Leverage local phone numbers for your customers to call and text, or use your own number.
Voicemails	Customization	TaskRouter + SendGrid	A common customization. Voicemail recordings can also be emailed to mailboxes or individual email addresses according to business rules.
Remote Agents	Out-of-box	Twilio Flex	Twilio Flex is browser-based by design. Twilio client uses WebRTC for optimized voice quality. .
Service Level Agreements	Support Agrmt.	Twilio Support	WV ERPB will have the SLA of 99.95% uptime
Queued Callback	Customization	Twilio Flex	Queued Callback allows a caller's "place in line" to be reserved. When it's their turn in the queue, the caller receives a call from the system and is connected to the available agent.

Agent-To-Agent Chat	Not Supported	N/A	Not Supported by default. Recommended approach is to use external communication system such as Microsoft Teams for Internal Chat. Can be custom developed for additional fee.
Call Scripts	Customization	Twilio Studio	Twilio Studio provides a visual drag and drop IVR call flow builder.
Customer Service Satisfaction Surveys	Customization	Twilio Flex UI + Twilio Programmable Voice	Custom Flex Plugin development to redirect caller to phone survey after agent completes call
Call Recording	Out-of-box	Twilio Flex	All calls are recorded by default with Twilio Flex, and linked to a historical record in Flex Insights.
Call Logging	Out-of-box	Twilio Flex Insights	Historical records of call activity included with Flex Insights
Skill-Based Routing	Out-of-box	Twilio Flex	Flex Supervisor UI includes ability for supervisors to manage and assign skills.
Utilize Existing Hardware	Out-of-box	Twilio Flex	Flex Supports routing to browser, SIP Endpoint, or external phone number. This solution will use external phone number to route calls to agents' MS Teams DIDs
Implementation and Training Services	Service	VPS Implementation	VPS Staff will provide launch training and ongoing support. VPS will provide transfer documentation, training videos, and record any demos provided to WV ERPB.
Agent / Supervisor Requirements			
Call Recording by both Agent and Supervisor	Out-of-box	Twilio Flex	All calls are recorded by default with Twilio Flex, and linked to a historical record in Flex Insights.

Masking HIPAA or PII Information	Not Supported	N/A	Not Supported as part of Twilio Flex default functionality. Third party addons are available for additional fees.
Take Control of a Call, Monitor a Call, Communicate Directly with an Agent	Out-of-box /Customiz ation	Twilio Flex	Flex supports monitoring calls out-of-the-box. Barge and Whisper available as VPS Flex Add-On with VPS Support plan
Reporting Needs			
Customizable and Personalized Dashboards	Config	Flex Insights	Flex Insights is a powerful reporting engine included with Twilio Flex.
Customizable Metrics	Config.	Flex Insights	Flex Insights is a powerful reporting engine included with Twilio Flex. Number of Calls in Queue, Average Wait Time for Callers, etc. are all possible metrics.
Keep Historical Reporting Records	Out-of-box	Flex Insights	Twilio Flex includes historical reporting capabilities, Flex Insights. Flex Insights is a contact center reporting tool that allows contact center supervisors, managers, and data analysts to create, modify, share, and consume reports and dashboards for interactions handled by Flex.
IVR Statistics	Customiza tion	Twilio Studio + Flex Insights	IVR Metrics will be integrated between Twilio Studio and Flex Insights
Custom Service Level Calculations for SLAs	Config.	Flex Insights	Flex Insights is a powerful reporting engine included with Twilio Flex. Service SLAs can be calculated as a customizable metric.
Estimated Call Volumes			
400 to 800 Calls Per Day	Platform	Twilio Platform	Twilio's elastic on demand scalability allows your contact center to handle unlimited interactions

Maximum 20 callers in Queue	Platform	Twilio Platform	Twilio's elastic on demand scalability allows your contact center to handle unlimited interactions
Scaling Licenses Up/Down as Needed	Platform	Twilio Platform	Flex Agent Licenses are quoted as monthly named users. Option exists for Agent Hour Licensing for greater Flexibility

The solution will be 100% self-contained within the secure cloud infrastructures of each of the solution components. All provided pricing for licensing includes hosting. This will provide the greatest flexibility for scaling the system according to WV ERPB's needs, and will eliminate waste resulting from unused capacity.

For enterprise identity management, **Twilio Flex relies completely on integrating with your existing SAML-based IDP**. This is to reduce the risk of creating additional overhead by having redundant systems in place. We will work with WV ERPB to confirm and current compatible SSO platform in use, or help guide in vendor selection. This is not included in the scope of our proposal since it's an organization-wide system.

4.2.   Product and Service History

Vision Point Systems has been delivering voice applications and contact center solutions since 2002. In 2011, upon realizing that cloud-based communications were quickly becoming the wave of the future, VPS began integrating Twilio's platform into our customers' solutions. In 2013, VPS officially became a Twilio Systems Integrator Partner and we have been serving customers of all sizes since that time.

Twilio Flex, as a packaged offering, was made generally available in 2019. However, many of the services that comprise Flex, such as Programmable Voice, Messaging, TaskRouter, and Studio, have been in operation by Twilio for many years prior. The Twilio Flex UI is the newest innovation from Twilio, and is made possible through the use of modern, dynamic, web-based technology such as ReactJS.

4.3.   Ability to Meet Objectives

The objectives of WV ERPB are clear - launch a state of the art omnichannel contact center that prioritizes the individual contact experience, minimizes operational costs, and optimizes operational flexibility, all while maintaining control of security and privacy. Team VPS is

confident that our proposed solution will bring both immediate and long-lasting results in all of these areas.

In terms of customer experience, the Twilio Programmable Voice platform is unparalleled in providing intelligence within the inbound call handling process. Using tools like Twilio Studio, Team VPS will build self-service applications using an intuitive drag-and-drop interface that will provide WV ERPB with valuable insight into the process design. Additionally, Twilio's native multilingual support will allow customers to be supported in a familiar environment.

Twilio's cloud-native, API-based programmability will streamline the self-service interface by allowing WV ERPB to tap into data sources at any point in the call flow, and, when necessary, leverage the capabilities of Twilio Task Router and Flex to get the call to the right agent in an optimized manner, with the customer data and intent automatically populated in their desktop environment. Twilio Flex's browser-based desktop is ideal for distributed or work-from-home contact centers, with its full suite of supervisor features available from anywhere.

Our solution will also provide WV ERPB with unparalleled business intelligence through reporting. Real-time and historical data will be available through Flex Insights, and the typical call center metrics will be augmented and tightly integrated with data from the full customer journey, such as which path the caller took before routing to an agent.

Perhaps the most exciting feature of our solution is the flexibility it provides. With no hardware required, WV ERPB will be able to respond and adapt to the ever-changing needs of its many and varied users. All components within the solution are designed to be lightweight and modular, enabling rapid change as desired. As a contracted customer, WV ERPB will have the SLA of 99.95% uptime.

Team VPS' expertise in the technology, along with our experience delivering solutions for non-profit, public sector, as well as commercial businesses gives us the utmost confidence in our ability to meet WV ERPB's desired timeline to deliver a go-live.

4.4.   Compliance and Security

4.4.1.   Security Overview

Team VPS will review WV ERPB's business processes, cloud-specific IT controls, cybersecurity risks, compliance requirements, and related standards at the onset of the project. Team VPS will establish project controls to mitigate risks.

In regard to Twilio's platform, Twilio's trust and security team is responsible for all aspects of product security, vendor security due diligence, working with customers regarding security matters, security incident management, and reporting, etc.

The Twilio security framework is based on the ISO 27001 Information Security Standard and includes programs covering: Policies and Procedures, Asset Management, Access Management, Cryptography, Physical Security, Operations Security, Communications Security, Business Continuity Security, People Security, Product Security, Cloud and Network Infrastructure Security, Security Compliance, Third-Party Security, Vulnerability Management, as well as Security Monitoring and Incident Response.

Security is represented at the highest levels of Twilio with their Chief Information Security Officer meeting with executive management regularly to discuss issues and coordinate company-wide security initiatives. Information security policies and standards are approved by management and available to all Twilio employees.

4.4.2.   Security Tokens

Twilio Flex integrates with your existing Identity Provider to authenticate users (agents, supervisors or administrators) and enable single sign-on (SSO). Flex allows for integration with any Identity Provider that supports SAML 2.0 (Such as Google, Active Directory, Okta, etc.), enabling you to use your primary corporate account as the identity provider for Flex.

4.4.3.   Compliance and Certifications

Twilio is consistently evaluated by a third-party auditor for common controls across the organization. These auditors continually test processes and procedures such as Vulnerability Management, Access Management, Risk Management, Incident Management, Vendor Management, SDLC Processes, Network Controls, Human Resources, and General Governance Controls. Additionally, Twilio teams are continually monitoring, scanning, and testing internal processes for alignment with the policies and procedures.

Twilio has an annual SOC 2 Type 2 audit. The controls for the SOC 2 Type 2 audit include Twilio's Information Security Policy requirement.

Twilio is ISO 27001, 27017 & 27018 certified, and is a PCI Level 3 Merchant (which means all credit card processing is outsourced).

Twilio Programmable Voice is Payment Card Industry Data Security Standard (PCI DSS) Level 1 compliant and can be used to collect and tokenize credit card data over the phone and/or optionally make a payment on behalf of customer applications. Twilio does not store cardholder

data on its platform. Once the token is transmitted to the customer application, the information is deleted via an automated process.

SOC2 type II for Voice and SOC2 Type 1 for SMS and Video have been achieved. Results of the audit can be shared upon Contract Award.

At this time, Twilio offers a Business Associate Addendum (BAA) for their HIPAA Eligible Products and Services (https://s3.amazonaws.com/ahoy-assets.twilio.com/docs/HIPAA-eligible-products-and-services.pdf). This list will be updated as products and services are continuously brought into HIPAA eligibility. Implementing in a HIPAA compliant manner is detailed here: https://s3.amazonaws.com/ahoy-assets.twilio.com/docs/architecting-for-HIPAA.pdf. There are also ways that we can support healthcare workloads without the need for a BAA. It really depends on where the PHI in your workload is (or if there is a way to architect your product so that PHI doesn't hit Twilio's services at all).

Twilio follows standards:

- ISO 27001, ISO 27017, ISO 27018
- Prog. Voice - SOC 2 Type 1 & PCI DSS
- Authy - SOC 2 Type 2
- SendGrid - SOC 2 Type 2, CSA STAR, GDPR & HIPAA (eligible products only)

4.4.4. Encryption

Twilio supports TLS 1.2 to encrypt network traffic between customer applications and Twilio. Twilio will default to the highest cipher supported by the customer's client, this is configured by the customer. Encryption is managed at the product level but, generally, PII stored in Twilio's AWS infrastructure will be encrypted-at-rest using industry-standard algorithms (AES-256). Twilio offers additional security controls for some products such as Twilio's Message Body Redaction feature for Programmable SMS and Voice Recording Encryption. Remember ensuring appropriate data protection for Customer Data processed on Twilio's platform is a shared responsibility between you, our customer, using Twilio's Platform and Twilio, as the provider of the platform.

4.5. Solution Details

4.5.1. Contact Center Application

1) **System Administration**

The Twilio Flex platform consists of the following:

- Twilio APIs and visual workflow builders to control channels, routing, and integrations
- Conversational AI to design, build and iterate IVRs and chatbots that enable contextual handoff of self-service interactions to live agents
- React SDKs to extend and customize Agent, Supervisor, and Administrator UIs
- Dashboards and reports for metrics, monitoring and quality assessments

Omni-channel Contact Center Capabilities:

- Browser based user experience with embedded voice (WebRTC) for office or remote users
- A fault-tolerant voice and messaging network with phone numbers in over 100 countries.
- Programmable skill / attribute-based routing engine
- Real Time dashboards and historical reporting tools
- Self Service platform for voice and text-based interactions
- Rich agent experience including screen pop, vast integration capabilities and features such as voicemail, dial, conference, hold, transfer

Communication Channels:

- Voice, Chat, SMS, WhatsApp, Facebook Messenger, Line, Video and Custom channels

Out-of-the-Box:

- As soon as a Twilio Flex account is established, the user is ready to receive Voice, Chat and SMS based interactions
- Twilio's elastic on demand scalability allows your contact center to handle unlimited interactions
- WebRTC voice connectivity allows agents to be able to take calls with no additional effort
- Out-of-the-box Flex UI enables agents to receive omni-channel interactions via queue, based on agent skills
- Supervisor Monitoring allows the Supervisor to manage the status, activities and skills of their agents
- Flex Insights (Business Intelligence) comes with some pre-built reports

Two consoles are used for administering the platform.

The Flex administrator features are accessed through the main Flex UI and allow configuration of skills, Flex features and some system integrations. Both administrators and supervisors can use the Teams View to assign skills to agents, temporarily disable skills and set levels.

All other configuration is through the Twilio console which can be configured to utilize the same SSO as Flex, giving a single set of credentials. This console is used to configure lower-level parameters, telephone numbers, contact channels and routing rules. This separation exists to assist with segregation of duties, allowing lower-level configuration and administration to be performed by more technical staff.

No corporate or proprietary services or gateways are required.

Twilio includes guided configuration for Flex project setup, Studio Flow creation, Chatbot creation, as well as free detailed tutorials for many common Flex configuration tasks like CRM integration at the IVR and UI level.

For administration of data and message archives, based on the use case there are a number of options. Flex Insights can be the repository or the conversation history can be stored inside of a CRM tool or another system of record. Equally using the API's, WV ERPB can copy historical information and metadata in a data lake for deeper analytics.

Metadata about all Twilio-based customer interactions is stored on the platform and can be retrieved via API. For messaging channels, this can include the text of the messages. Many customers retrieve this data and combine it with other customer profiles and transaction data in their CRM system or other system of record. Some prefer to leave it on the Twilio platform and access it from there as needed. This data can then selectively be shared with agents in the Twilio Flex workspace. Being fully programmable, there are a number of design options in this area.

2) **Interactive Voice/Media Response**

Twilio makes it simple to build an IVR, or Interactive Voice Response, into any contact center. Twilio's IVR allows incoming voice callers to navigate a menu to access the right information, perform automatic transactions and lookups, self-solve or dynamically connect to the right person. Supplement human operators or bypass them completely for common transactions and information requests.

By combining customer input (DTMF) or voice, with simple web application logic, building call center menus can be done efficiently. Technical documentation built and maintained by developers have gathered snippets, tutorials, quick start guides, and full sample applications for various IVR use cases across many web languages and frameworks. But this is not limited to

voice, other channels like SMS can be leveraged to guide customers to options that create a tailored journey when interacting with WV ERPB. Interactions can then be served based on their attributes and offered self-service, routing to the right agent and managed using the correct priority.
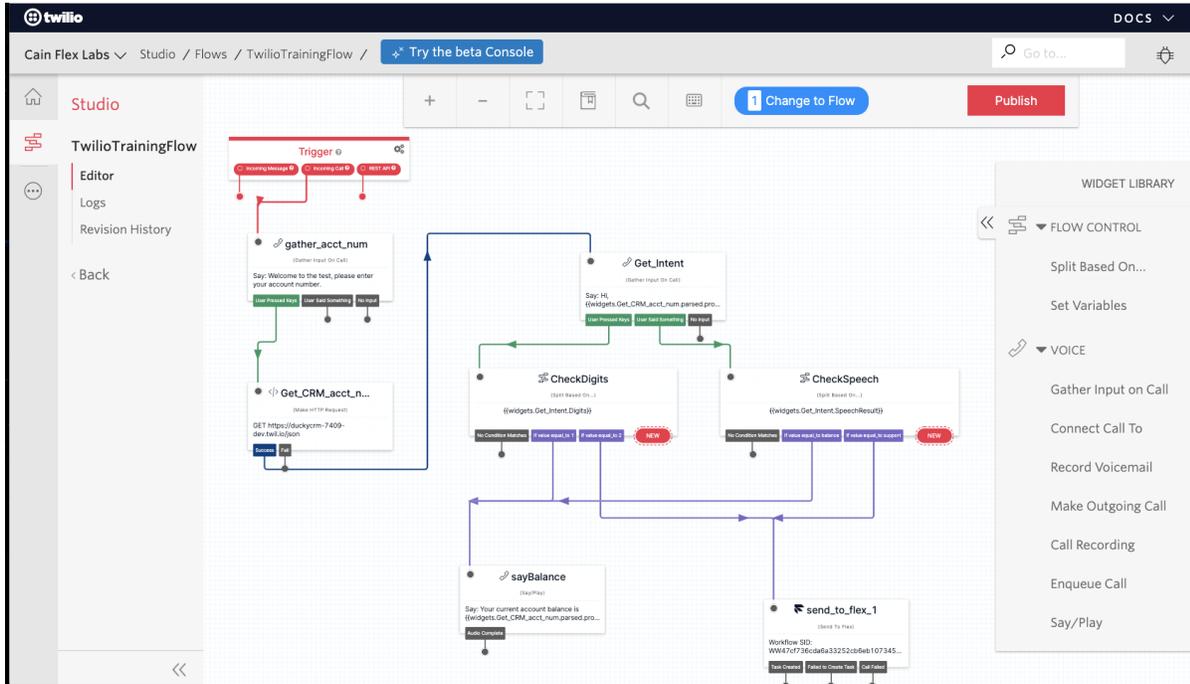

Figure 1

Twilio Studio, the workflow building tool, is shown above. Maintenance of Studio flows is intuitive, and no extensive training is expected for analysts or developers.

All of the Twilio services that comprise Flex are modular in nature, each with at least one API and support for multiple development languages. In addition, the architecture and any associated customization, consists of discrete micro services and code blocks that inherently allow tremendous flexibility and support agile development. Studio Flow deployments can be managed via the Studio API, so the deployment process can be integrated in any DevOps workflow.

3) Automatic Call/Media Distribution

All channels are handled through the single Flex desktop. By default, a panel on the left of the screen shows all active tasks the agent has accepted and any that are being offered for work. This is done in the same way for call channels, allowing a single agent to have multiple chat sessions active and still be able to accept an incoming phone call as a priority. The UI is standardized for all text-based chat channels including SMS, with voice calls being handled

through controls in place of the chat view. Further customization is possible, for example changing screen layout/branding based upon the active task to enable the agent to manage their context.

Twilio Flex's default priority is FIFO for all tasks. WV ERPB can add customized rules to change priority of tasks in the queue either by assigning default attributes to a task when it enters the queue or updating custom attributes to the task at any point in the queue. For example, a high priority customer's chat task can automatically be assigned to a high priority queue.

Twilio TaskRouter uses attribute-based expressions to map the correct agents to queues, as well as define complex skilling, language, geo, team and other agent attributes. These attributes, along with various TaskRouter Workflow options allow various overflow routing options based on time of day, queue depth or wait time, required skills, timeouts and capacity.

Chatbots can be added to the interactions before or during routing to queues in different ways. Twilio Studio is a visual Workbench that allows the user to create chatbots with the help of widgets. Twilio Studio is available in every language since it provides a free text format.

A chatbot can be created programmatically with the help of Twilio's APIs. Languages supported by such cognitive services are - amongst others - American English, Arabic, Chinese, Dutch, French (France/Canada), German, Gujarati, Hindi, Italian, Japanese, Korean, Marathi, Portuguese, Spanish (Spain, Mexico), Tamil, Telugu, Turkish etc.

Flex includes a set of native integrations for Zendesk, Dynamics and Salesforce, but can also be integrated with any CRM, whether it be SaaS, on-premise, or even custom. This same level of integrability also applies to critical supporting functions like Quality Assurance, voice biometrics engines, and speech analytics tools.

The key here is that Twilio is an API platform that enables communication of data across systems and channels to enhance the end user experience, whether that is improving the way an agent performs their role or as a customer inquiring about something important to them. These integrations can be mixed and matched based on the line of business and the reason the customer is interacting. Twilio Flex has the capability to seamlessly integrate to almost any modern data platform to unify the agent desktop experience. For transparency, in order to access the data gold stored in these systems, there must be a method to access them via API.

Twilio Flex has configurable integrations to Facebook Messenger, WhatsApp and Line. It also allows WV ERPB to bring their own channels, allowing for direct integrations to common social media networks or integrations to social media monitoring and aggregation tools.

The Twilio Flex architecture uniquely sets up WV ERPB for the future by staying up to date on the latest mainstream channels and having the extensibility to support new channels as the industry evolves.

4) **Integration**

Twilio's entire platform comprises RESTful APIs and supporting documentation to assist developers in building. The API references can be found here - https://www.twilio.com/docs/api

SDKs and supported language (JavaScript, Java, C#/.Net, Ruby, Node, PHP, Python) material can be found here - https://www.twilio.com/docs/libraries

Twilio Flex CRM integrations include look up and screen pop capabilities. There are a variety of pre-built connectors for easy screen pop and integration deployment. Flex makes it easy to build your own CRM integration through the Flex Plugin Framework. Any CRM, including MS Dynamics, that has an API/SDK interface is compatible to integrate with Flex. The same applies to other systems of record like ServiceNow, Salesforce, Zendesk, Pegasystems and homegrown environments. We envision being able to do the same for case management systems such as iCarol or Aunt Bertha, or whatever system is ultimately chosen by WV ERPB.

Creating a contact record in most CRMs with RESTful APIs is a very simple process with Twilio Flex. To cite an example from a Flex-Salesforce integration:

1. Create a Studio flow to support a voice and/or digital channel and gather a unique identifier (phone number, email, caseID, etc.) from the customer

2. Use this unique attribute to lookup (make an API request) the contact in Salesforce

3. If no record exists, then use the Salesforce API methods for creating a new contact to insert a new contact with the parameters we have collected from the customer

4. If the interaction continues and ultimately routes to a human agent using Flex we can also "pop" this newly created record into Salesforce (or other CRM system) or simply pass the desired data into a custom Flex component within the agent's UI

5) **Agent Desktop**
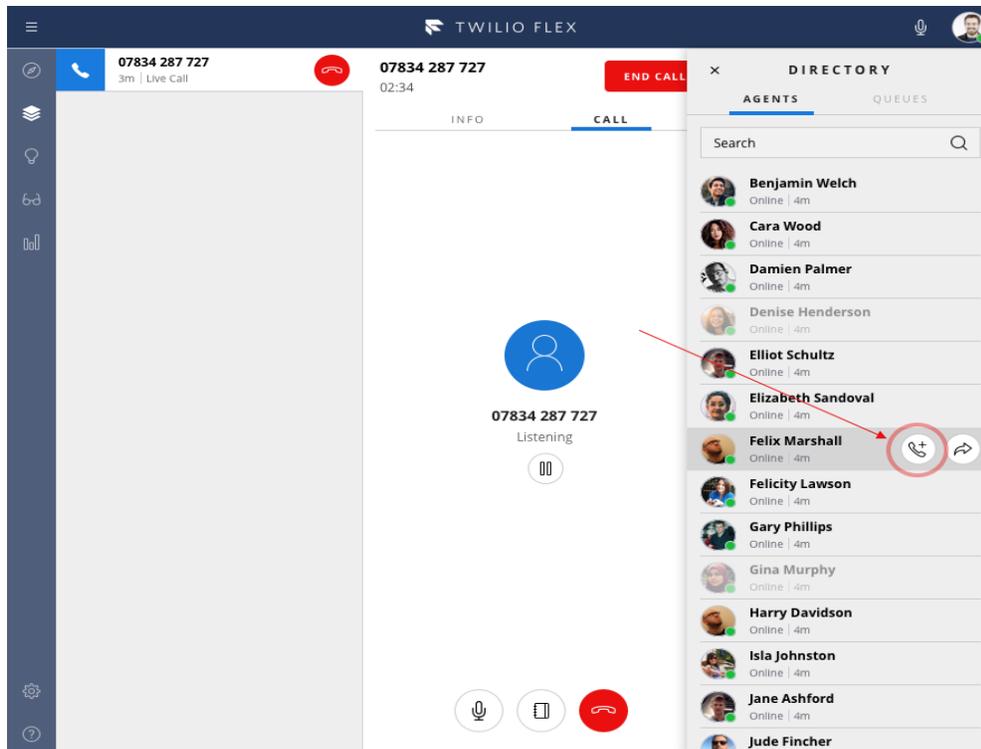
Figure 2

The architecture of the desktop UI allows for a number of customization options including but not limited to:

- Programmatically customize the UI using Plugin Builder or Sample project (for self-hosted, see below)
- Configure the UI or manipulate default properties for standard Flex components
- Customize themes and styles
- Control localization and templates
- Add, replace or remove components
- Take advantage of UI actions by listening, intercepting and manipulating UI events
- Customize agent desktop notifications using Notifications Framework
- Alter behavior and appearance for native channels and define custom ones with Task Channel Definition API
- Mix-in Task or Theme context to your custom components
- Leverage the Flex Manager object to get access and control underlying SDKs

For Twilio Flex the feature support is identical for home-based agents and VDI environments. From a call control perspective, the VDI deployment (software and hardware architecture) may dictate a specific client configuration to ensure a high-quality experience, namely for agents taking voice calls. Twilio's reference architecture uses an embedded WebRTC softphone client

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and support for high quality voice interactions may require leveraging browser content redirection (BCR) when VDI is used. Alternatively, Twilio Flex can use third party call control (i.e. a SIP endpoint).

6) Call Recording

Twilio Flex includes the ability for voice recordings. This includes the ability to perform dual channel recording to identify the outside caller and the internal party, recording playback, cross talk detection, silence detection, and basic quality management. For messaging channels, the message transcript is also available in the recording interface for supervisors and quality managers to review and score.

Twilio managed recordings are accessed from Flex Insights. Optionally, the recorded files may be accessed from other customer owned tools.

Twilio uses Amazon S3 cloud storage for all recordings. All of the recordings are also backed up, and all backups are encrypted at rest using strong encryption (volume level, AES - 256). Backup files are stored redundantly across multiple availability zones and are encrypted. We test backups when we reboot our hosts. Backups are retained for 30 days.

7) Agent Desktop Design and Deployment

Twilio Flex is built on React/JavaScript and leverages the Flex Plugin builder to support customizations. The plugin builder provides a number of benefits:

- Plugins can be applied to any running Flex instance. This lets you use the same plugins across projects that simulate dev/stage/prod environments, and it's also the preferred path for any partner integration.
- It decouples the customizations from individual Flex UI versions. As new versions are released, the plugins do not need to be rebuilt and redeployed.
- It allows for modular development. Plugins can be scoped to particular pages, personas, or functions to help separate concerns.
- Flex UI is a library of programmable or dynamic components that expose a Content property and allows you to add, replace and remove any component and its children,

The Flex Actions Framework also allows for unprecedented control of event data that describes how the user is interacting with the Flex UI. As you write Plugins, the Actions Framework allows you to harness these events and define your own logic to describe how you want the Flex UI, CRM Data, or any other data, to change. You can register events before or after an action fires, or even replace the behavior of an Action.

4.5.2. Supervisor Application

1) Wallboard/ Real-time Dashboard Display

Twilio includes similar real-time data feeds for all omni-channel communications in a single user interface.

The Flex Teams View provides a real-time view of contact center agents' activity. With this information, supervisors can monitor individual tasks for training and problem-solving in the contact center. This tool helps supervisors ensure that agents' interactions with customers meet quality standards.
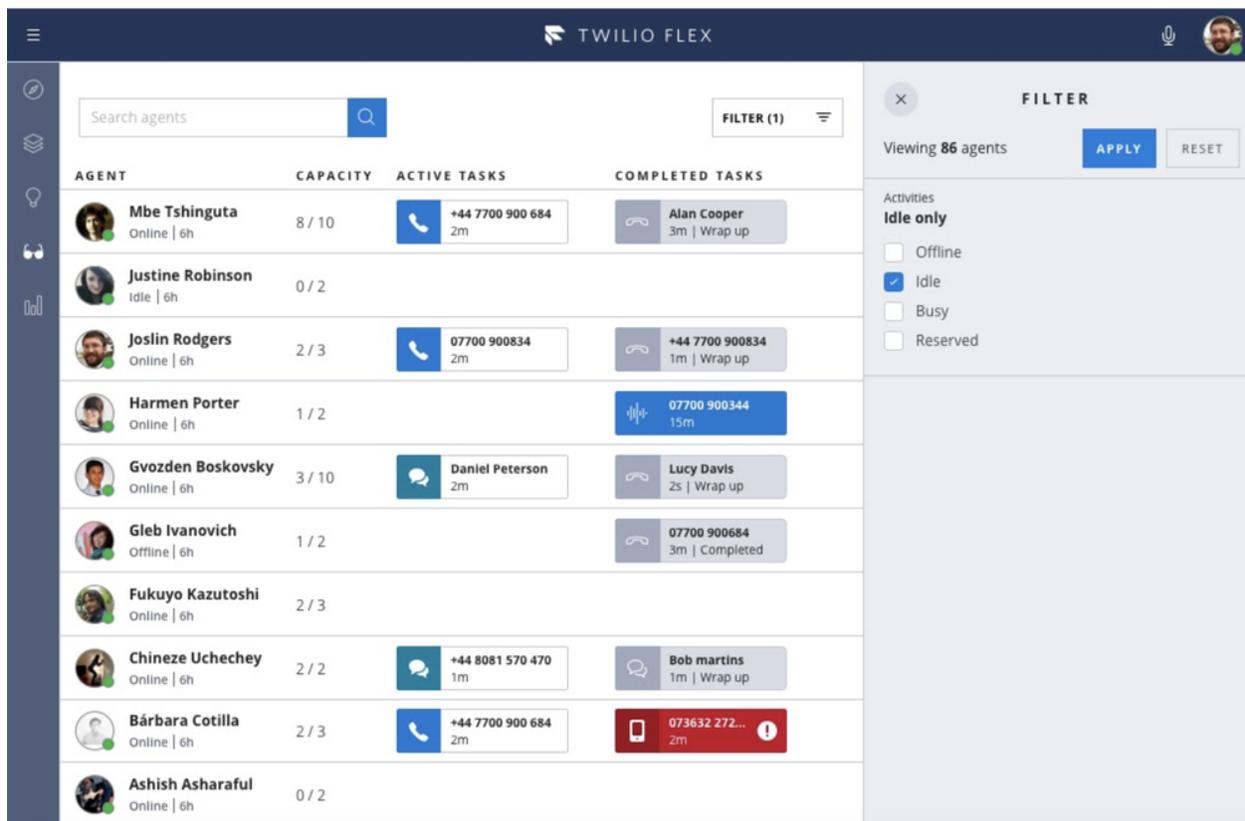

Figure 3

The Teams View can be customized and configured to add / remove date or define custom filters.

Out of the box Twilio Flex includes the Queue Stats view, below, for detailed queue and SLA data. This view is available to any logged in Flex supervisor or admin, and can be configured to display on a mounted monitor in a call center work area. Flex also includes a number of real-time
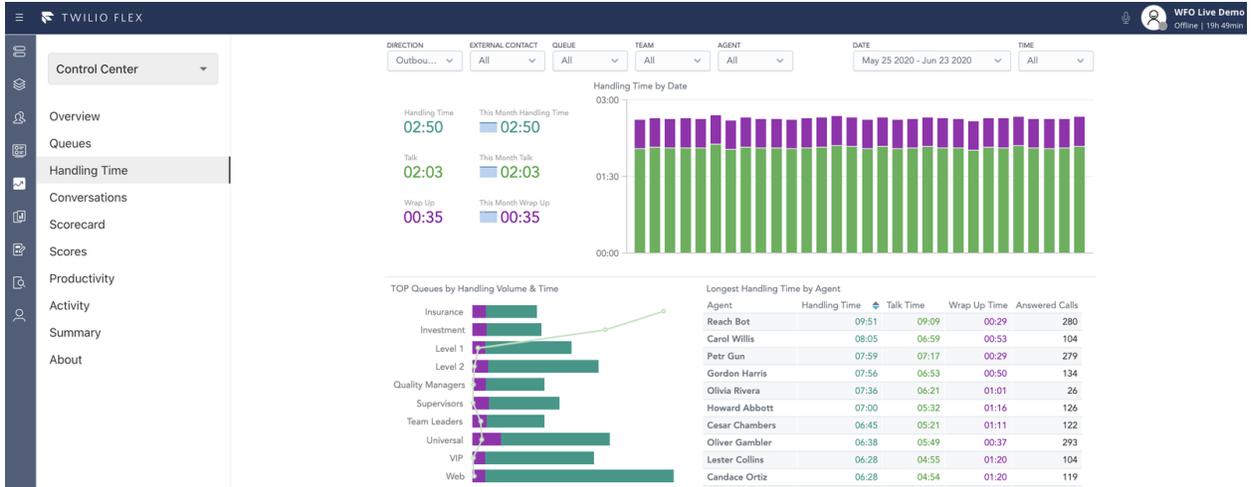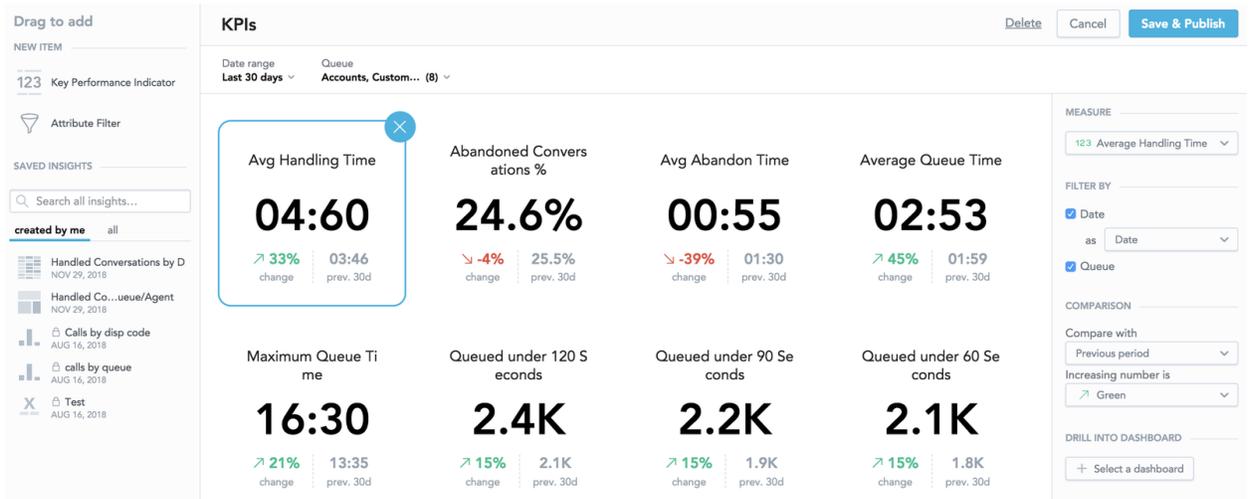
event-based APIs for consuming data for custom views, including wallboard/dashboard systems or custom components to be rendered in an agent or supervisor desktop layout.

Figure 4

While not included in the stock Flex desktop, live indicators for threshold breaches can be programmed and supported within the Flex UI and/or custom data views.

2) Historical Reporting

Twilio Flex includes historical reporting capabilities, Flex Insights. Flex Insights is a contact center reporting tool that allows contact center supervisors, managers, and data analysts to create, modify, share, and consume reports and dashboards for interactions handled by Flex.
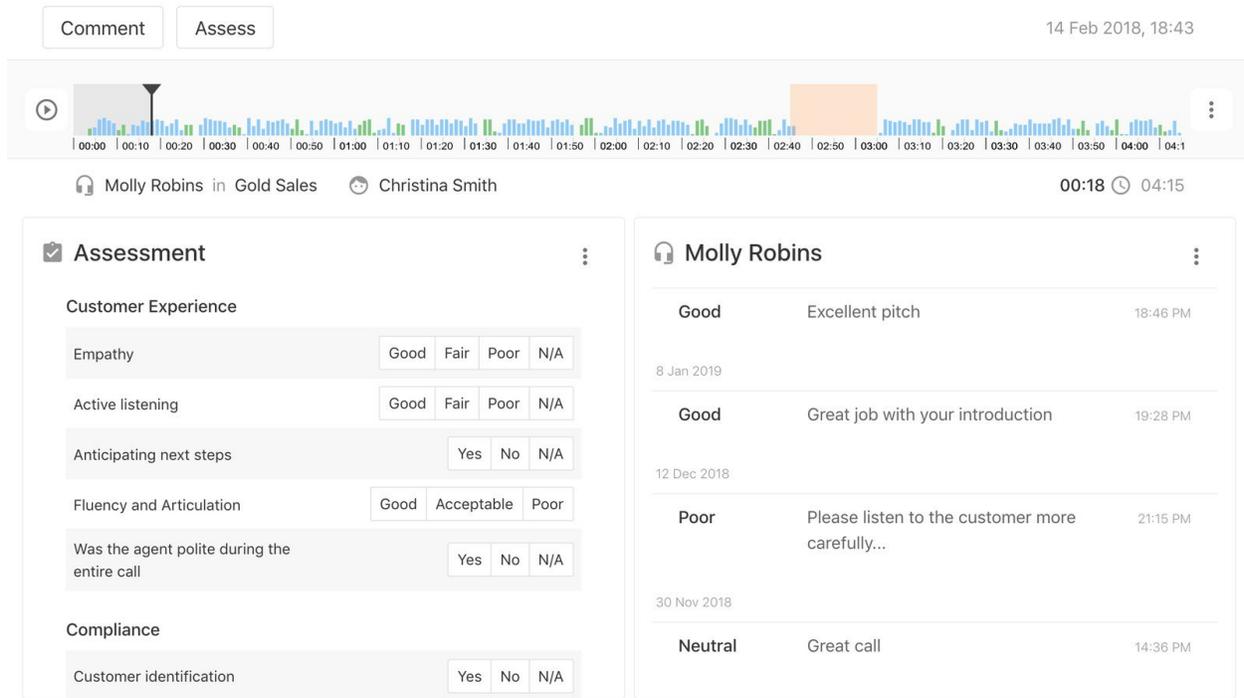
Figure 5

Figure 6

Figure 7

Flex Insights includes:

- Pre-built reports and dashboards
- Custom report and dashboard builder
- Scheduled report and dashboard emails
- Email-based alerts on metrics
- Conversation player and assessments (for Recordings and light quality management)

Flex Insights provides the following capabilities natively:

- Custom Metric and KPI Definition: Define your own custom metrics and KPIs and customize existing metrics and KPIs to fit your business.
- Custom Report Builder: Quickly create custom reports and dashboards through an easy-to-use report builder.
- Email-Based Alerting on Metrics: Define custom alerting thresholds on any metric and receive emails when that threshold is exceeded.
- Pre-Built Reports and Dashboards: Analyze the performance of your contact center through powerful built-in reports.
- Report and Dashboard Exports: Export dashboards and reports as an Excel File, CSV, PNG Image or PDF.

- Report Export API: Load your analyzed interaction data into your data warehouse through our REST API.
- Reporting on Custom Interaction Data: Add context to, improve the richness of, and slice and dice your data by using custom attributes attached to an interaction.
- Scheduled Dashboard and Report Emails: Schedule emails of Reports and Dashboards on a defined interval.

Beyond the items listed above, access to the data used to populate these reports is accessible to WV ERPB via API, and this allows the business to add the needed data to a data warehouse and use the BI tools of choice to analyze and report on all the activity handled in the contact center operations.

Twilio Flex's architecture and routing engine includes a custom channel API today. This API gives Flex the ability to interface with any new digital medium that a customer may want to route into a contact center workflow. Examples include: WhatsApp, FB Messenger, IoT events, some future social media channels not yet developed, etc.

This custom API is part of data architecture today thus any new channel will have native support for real-time and historical data requirements.

Realtime and Historical reporting engines are completely segregated. Running an extensive historical report will have no impact on the performance of real-time queries.

5.0 Project Approach

5.1.1.   Installation

The concept of "Installation" for Twilio Flex is non-traditional compared to on premise contact center platforms. In fact, once a project is created through the Twilio console, the only configuration required to start handling calls in production is to configure Single-Sign-On for user account management. Obviously, we will be conducting a more thorough initial deployment project, but anecdotes of deploying Flex in weeks or days are not exaggerations.

Team VPS offers a standardized Flex Deployment package that follows best practices informed by our experience as a Flex integrator. The major steps in any Flex project are:

- Configuration of Single-Sign-On (SAML)
- Validation of Agent workstation configuration
- Definition of queues, skills and call routing rules
- Definition of Messaging/Menus (Basic IVR)
- Definition of time-of-day rules

- Branding of Agent Desktop
- Definition of custom reporting requirements

After the core system is established in Phase 1, additional features, functionality, and components will be rolled out in an agile manner as described in the project plan.

The most time consuming aspect of the project will be IVR script conversion. Currently this task is estimated at 60 days. WV ERPB will have the option to choose to go live with the contact center platform with partial or temporary IVR scripts in place or wait until all script conversion is complete. The Conversion estimate may be revised with further information provided as well.

5.1.2.   Implementation

The initial go-live for contact centers will have special considerations to ensure a smooth transition. Some specific items will be:

- VPS will work with carriers to establish routing for TFN calls
- Agent workstation readiness
- IVR routing tests
- Establishment of maintenance greeting flows as needed
- Time-of-day rule validation
- Establishment of "war room" for contemporaneous support
- Provision for screen sharing for selected agents (if possible, given COVID restrictions, VPS will deploy staff to the contact center during the first week of operation for immediate support)
- Active log reviewing
- Call quality measurements
- Reporting validation
- Audit calls ("Secret Shopper")

5.1.3.   Training and Support

1) Training

One of the core principles of good design is ease of use. In developing applications for WV ERPB, Team VPS will leverage existing documentation not only in accelerating development of the new iterations of existing IVR applications, but also to facilitate training. During go-live, Team VPS will 1) facilitate UAT which will ensure that WV ERPB staff are familiar with the product as developed and that it's fit for use, and 2) demo the new functionality. These demos

will be recorded and available for training purposes. Train the trainer is an effective practice that Team VPS has employed in many projects to enable client stakeholders to quickly administer internal training sessions.

With any new environment there is an initial investment of time and resources to bring users up to speed. In this situation, the users are familiar with the use case and need only be briefed on the new user interface of Twilio, Twilio Flex, and any new functionality that those platforms introduce. Once the initial rollout is complete, subsequent releases will be addressed with demos and release notes.

5.1.4. Post-Launch Support

Support for the platform during the operation phase will be provided by members of Team VPS depending on the component and nature of this issue. The below table summarizes the responsibilities.

Functional Area	Responsible Support Contact

• Contact Center Operations
   ○ User Management
   ○ Call Routing
• Application Functionality
   ○ IVR Applications
   ○ Custom Flex add-ons
	VPS

• Twilio Platform and Telecommunications	Twilio (via VPS PMSS)

1) Monitoring

Twilio logs access events, security-related events, and API authentication. Alerts are sent to the security staff when anomalous events are detected. We use a log correlation tool for monitoring and alerting and a log-based intrusion detection tool. Twilio SendGrid monitors its systems through the use of audit logging; logs are sent to a secure server with restricted access to the information security team. Security logs are maintained for 365 days.

Twilio provides full transparency regarding our platform's availability at https://status.twilio.com. WV ERPB can subscribe to real- time updates via RSS feed, application webhook, email, etc.

2) Tier 1/2 Support (VPS)

VPS offers standardized Flex Support plans. For WV ERPB, we recommend the Full Service Plus plan, which includes the following services:

- Incident Support 24/7 – 24 hours by 7 days per week service is provided, with contact options available through phone, email and SMS.
- Access to VPS Flex add-ons – including Coach Mode and Number Blocking.
- Monthly System Health Review - Dedicated technical account manager will review behind-the-scenes performance and provide recommendations for improvement
- Upgrade Testing - Proactively test deployments with new Flex releases before updating in production.
- Pre-paid changes - Customizations to programmability, UI, Queue logic, etc. Limited to 4 hours/mo. Can bank for one month.
- Move/Add/Change - Full Service support for user administration and queue configuration.
- SLA - For Incident Support, a 30-minute response time via email, phone, or SMS. Unlimited incidents per month.

VPS will be the first line of contact for typical support requests. VPS uses Twilio Flex to manage our own omni-channel support contact center. Our Support Analysts are trained and certified on the Twilio Platform and Flex, and are located in VPS offices in Virginia or London, UK. Escalation paths exist to our senior Twilio Consultants, and arrangements will be made through WV ERPB dedicated account manager.

VPS Support Analysts utilize our proprietary "FSA" application to manage support incidents and inquiries. FSA is a custom-built application that allows VPS staff to manage the lifecycle of support cases, and to provide reference to our internal knowledge base. FSA also automates the proactive support activities by ensuring we meet our commitments for support items such as upgrade testing and monthly health check reviews.

3) Tier 3 Support (Twilio via VPS)

VPS is offering Partner Managed Services and Support (PMSS). This program is a premier offering that combines direct and dedicated access to Twilio Support, but is managed by VPS so that the customer, WV ERPB, can have one single point of contact for support issues and proactive planning. This plan includes:

- 24×7 Response: You get round-the-clock email and phone support with a 1-hour SLA for business-critical issues.

- Named Support Engineer: You are assigned a designated Technical Account Manager in customer support who understands your needs, your business, and your Twilio application.
- Support Manager Escalation Line: You will have direct access to a support manager on duty to help with any cases that need extra escalation.
- Quarterly Checkups: We will meet with you quarterly to review your support tickets and use cases and to assist with capacity planning and optimizing your Twilio deployment.

See https://www.twilio.com/legal/service-level-agreement for our SLA and associated penalties. VPS will respond to Incidents based on the case priority level. The priority level determines the hours during which our support staff will respond and triage new incidents. Case priorities are defined as follows:

Priority Level	Coverage	Qualifications
Priority 1 – Critical	24x7x365 (Phone)	• The Twilio Flex Instance or a significant portion of the Twilio Flex Instance is completely inoperative and is directly impacting the operation of Customer's business • Impact includes 50% or greater of agents failing to receive calls or end customer issues with IVRs and/or call routing • An outage of the main business number for an account • The following Twilio services qualify for Priority 1 support: Flex, Phone Numbers, and Task Router • The following programmable Voice, SMS and Chat services for which integrations created by VPS exist also qualify for Priority 1 support: PSTN, SIP, Conference, and Queue
Priority 2 – Major Problem	24x7x365 (Phone)	• The Twilio Flex Instance is usable, but is functionally degraded or restricted in a material manner with disruption to the normal operation of the system or a significant part of the system • Impact includes 20-50% of agents failing to receive calls or end customer issues with IVRs and/or call routing • Significant degrade of voice service; reduced and/or poor call quality • The following Twilio services qualify for Priority 2 support: Console, Studio, Notify, Authy, Functions, Lookup and Runtime • The following programmable Voice services for which integrations created by VPS exist, also qualify for Priority 2 support: Client Web, Client Mobile, Recording, Text to Speech, TwiML, Recording Transcripts
Priority 3 – Minor Problem	Standard Business Hours	• The Twilio Flex Instance is usable, but one or more functions may not operate as expected • Some circumvention may be required to provide services, but the problem does not significantly affect the application's function • An error that has no significant effect on operations • Issues that have workarounds in place • Certain features are not functioning properly or at all
Priority 4 – MACD and Informational	Standard Business Hours	• Low impact to the business or requests for information • General product and product catalog information • Product usage questions • Feature/functionality questions • General inquiries on "how to" MACD requests • Administrative support • End user training

The Response Times and Target Service Resolution for new tickets based on priority level is:

Severity	Service Level Target Time Frames**		
	Response	**Target Service Resolution**	**Coverage**
Priority 1- Critical	30 minutes	4 hours	24x7x365
Priority 2 – Major Problem	1 hour	6 hours	24x7x365
Priority 3- Minor Problem	2 Business hours	3 Business days	Standard Business Hours (section 5.1)
Priority 4 - MACD and Informational	2 Business hours	2 Business days	Standard Business Hours (section 5.1)

**Twilio Support SLA coverage

Support for Twilio's GA Products

Twilio Support is available to answer any questions for Generally Available (GA) products you have related to the following topics:

- Capabilities and functionality basic "how-to" and configuration guidance
- Troubleshooting issues with Twilio's Service and products
- Reporting and addressing product defects
- General account administration and billing assistance

While Twilio Support agents are limited to reviewing code snippets for troubleshooting purposes related to Twilio products, they are unable to write/rewrite your code, update your application, or architect or deploy solutions.

Support for Third Party (non-Twilio) Products and Services

Some customers may utilize a third party service integration powered by Twilio's API (example: making calls or sending SMS using a CRM software). In these cases, Twilio Support can help with the following topics:

- Purchasing a phone number
- Authentication using Twilio account credentials
- Troubleshooting service, delivery or call issues
- Twilio settings and configurations

Outside of your Twilio account status and service troubleshooting, our help is likely to be limited. When it comes to third party applications and services, we are unable to provide support for account status issues, or usage/configuration instructions.

Support for Twilio's Preview and Beta Products

Twilio products and features in pilot, developer preview, and public beta are not covered by Twilio Support agreements and will not be supported via chat or paid phone support until after production launch. Customer help requests for developer preview and public beta products will be handled by Twilio's product engineers to improve them for general availability release.

Notice: Developer preview and public beta help requests are handled by the engineering teams building these products, so response times may vary.

    4) Upgrades and New Releases

Platform Perspective

Twilio's hosted flex.twilio.com platform allows you to run the Flex UI without needing to build, deploy, and update the app yourself. All of the minor releases from the current major release are available on the platform, as well as the last minor release of the previous major release. By default, all accounts are configured to automatically update to new Flex UI minor releases. You can opt-out and pin your account to a particular minor version. Pinned accounts will continue to update to the latest patch version of that minor release. We won't automatically enroll you in a new major release because it may contain breaking changes. You'll be able to control when to apply that update. https://www.twilio.com/docs/flex/how-we-release-flex

Vision Point Systems' Flex Support plans include proactive Flex version upgrade testing at no extra cost.

Historical Flex releases and a view into our release cadence can be referenced here: https://www.twilio.com/docs/flex/release-notes

Twilio is built atop AWS and is a true multi-tenant cloud platform that has continued to leverage AWS technologies to deliver multi-channel communications that reach users in almost every part of the world. As an API platform, Twilio's developers follow the Twilio SDLC while developing our products, ensuring products are secure by design, in development, and after they have been deployed. Twilio security engineers continuously perform numerous activities to ensure that our products are secure, including:

- Internal security reviews before products are launched

- Regular penetration tests performed by third-party contractors
- Continuously running a bug bounty program
- Continuously running internal and external security tests including code scan
- Regularly conducted threat models
- OWASP Top 10

As a cloud service provider, Twilio delivers constant improvements and releases to improve the reliability and capabilities of our platform. As such, Twilio's pricing model includes new releases and upgrades to existing, licensed services. Depending on the feature or solution, WV ERPB may need to license the service which is determined by Twilio's product team via public announcements.

Application Perspective

Team VPS intends to support WV ERPB with multiple environments:

- Development - new feature development.
- Staging - sometimes called Pre-prod, is isolated from the inherent instability of the Development environment so that features fully tested can be reviewed by the PO and accepted or rejected (Pre-prod should be an exact copy of the Production environment).
- Production - the final, highest environment exposed to end users.

Changes and new features will be processed according to the SDLC and validated in each environment before being promoted to the next. Changes to the platform, including patches and upgrades will be deployed in lower environments and validated thoroughly before deployment to production.

Team VPS WV ERPB support team will track any reported defects in Jira. Those defects will undergo a triage process in which the severity and priority of the defect is assessed, and a remediation plan is created. Typically, minor bugs are added to the product backlog and corrected in subsequent releases. Critical defects can be corrected quickly and deployed as a hotfix outside the regular deployment cadence. In all cases, the fix for defects will be deployed in lower environments and validated prior to release in the production environment.

6.0 Assumptions and Risks

1) Risk: TFN Routing -VPS will work with Twilio on TFN port request timing, but this cannot be controlled exactly. Mitigation will be put in place to support temporary redirect to old phone system until new system is ready to launch.