

Evaluating the True Cost of Ownership of an IVR Solution



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Table of Contents

Introduction 2

Framework to develop the True Cost of an IVR Solution..... 3

On-Demand IVR Platforms - Cost Savings and Business Value 5

 Savings in Upfront and Other One-Time Costs..... 5

 Savings in Recurring Costs 6

 Additional Benefits..... 9

Customer Successes..... 10

 Leading Financial Services firm 10

 Leading Healthcare Services firm 10

Conclusion 11

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Introduction

Businesses looking to upgrade their Interactive Voice Response (IVR) system to deliver a superior caller experience while lowering costs face a major dilemma. Delivering a superior caller experience can involve costly investments in a number of areas:

- Designing and developing voice applications that carefully anticipate customer needs and proactively deliver personalized experiences that meet those needs
- Licensing call processing technology software that includes speech recognition, text-to-speech, etc.
- Purchasing sufficient hardware infrastructure to ensure every call gets answered with the intended caller experience.
- Building sufficient redundancy and disaster recovery for continuous service despite seasonal spikes or unanticipated events
- Investing regularly in updating and refreshing the IVR infrastructure to take advantage of the latest technologies (e.g., speech recognition upgrades, multi-modal, etc.)

Given the importance of every customer call and the inherent variability of call traffic over time, it is difficult for businesses to deliver a truly superior caller experience without making investments across all the above areas. This is particularly true if the call traffic is seasonal, or has unpredictable spikes, or if natural events or business disruptions can cause significant spikes in call volumes. Airlines, brokerages, and transportation companies are especially susceptible when call volumes spike due to bad weather, market conditions, holiday periods, etc.

Tellme customers have delivered superior caller experiences while also realizing significant financial benefits through the continued long-term usage of the Tellme platform. Tellme's superior call processing services, coupled with our "pay-as-you-go" pricing and on-demand capacity have enabled our customers to deliver highly differentiated and personalized experiences while reducing the costs and headaches of managing the IVR, while retaining full control of their data and applications.

When evaluating the financial benefits of a proposed IVR solution, it is critical to account carefully for all costs and benefits. This includes costs typically incurred with the IVR provider, the business benefits that can be hard to quantify yet deliver significant value, and auxiliary costs incurred outside the IVR provider. These auxiliary costs, often overlooked, add up to a significant portion of the Total Cost of Ownership (TCO) calculation.

In this paper, we present a framework for capturing a full view of costs incurred in purchasing, installing, deploying, and maintaining an IVR solution that consistently delivers a superior caller experience – with a special focus on how Tellme delivers cost savings while providing significant business value. Finally, we present case studies of how Tellme customers realize measurable economic benefits while still enjoying an industry-leading caller experience – thereby solving the cost vs. caller experience dilemma.



Auxiliary costs are often overlooked, but add up to a significant portion of the TCO calculation.



Framework to develop the True Cost of an IVR Solution

When evaluating IVR systems, businesses often focus narrowly on the price tag of the system purchased from the IVR vendor without considering all the upfront costs, telecom costs, ongoing maintenance costs, and support (labor) and facilities costs that are required for consistent delivery of a superior caller experience. When evaluating new IVR deployment models, price comparisons often fail because they neglect to compare the true cost of delivering a comparable and equivalent level of caller experience and performance. Simple dollar-for-dollar comparisons also neglect soft benefits, which can significantly impact business success through customer loyalty and retention. As a result, businesses often stay with outdated IVR systems burdened by hidden costs, leaving them vulnerable to competitors running lower cost and higher quality IVR systems.

It is therefore important that when businesses evaluate IVR solutions, and especially when they compare on-demand or hosted solutions such as Tellme with premise-based systems, they develop a 3 to 5 year holistic view of all costs incurred and benefits realized. Developing this comprehensive view ensures that purchase decisions are based on the True Cost of Ownership and are not unduly influenced by short-term savings in any given area.

In this section, we present a framework for evaluating the total cost of ownership of an IVR solution. There are two broad cost categories to consider when evaluating IVR solutions:

- **Upfront and Other One-time Costs:** This includes the upfront hardware and software costs to purchase, install, and configure the system, application development costs and planned IVR upgrade costs.
 - a. **System Purchase and Deployment Costs:** This includes the cost of the core IVR hardware / software, speech recognition licenses, TTS engine licenses, licenses for back-end integration software, enhanced reporting packages, remote / centralized monitoring and management software, development and QA systems, development tool licenses, additional back-end infrastructure or integration, installation and configuration / testing costs (labor).
 - b. **Application Development Costs:** This includes the cost to develop, deploy, and/or migrate voice applications.
 - c. **System Upgrade Costs:** This includes the cost to upgrade IVR hardware / software, speech recognition engine and TTS engine, and the cost of installation / configuration of the system upgrades and application updates (development, regression testing, bug fix, etc). This major investment is typically incurred every 3-5 years and typically requires additional system purchase and application development costs.
- **Recurring Costs:** This includes call center costs, hardware and software maintenance costs, facilities and support costs, and telecom and routing costs.
 - a. **Call Center Costs:** This includes the variable cost of the call center agents and inbound trunks required to handle inbound and outbound calls.



- b. **Hardware and Software Maintenance Costs:** This includes the cost of annual hardware / software maintenance, annual application maintenance, re-tuning common grammars, extending bulk audio libraries, and adapting and retraining the acoustic model.
- c. **Facilities and Support Personnel Costs:** This includes the cost of data and call center facilities (space, power, cooling, etc), IVR support personnel, active 24x7 monitoring and management, proprietary IVR application developers, open-standards application developers, back-end integration developers, UI designers, audio producers, grammar tuning experts and quality assurance engineers.
- d. **Telecom, Processing and Routing Costs:** This includes the cost of carrier based prompting, IVR based prompting, platform fees, CTI data dips, transfer charges for call routing, tie lines for call routing, telecom minutes (transport charges) and inbound call center trunks.

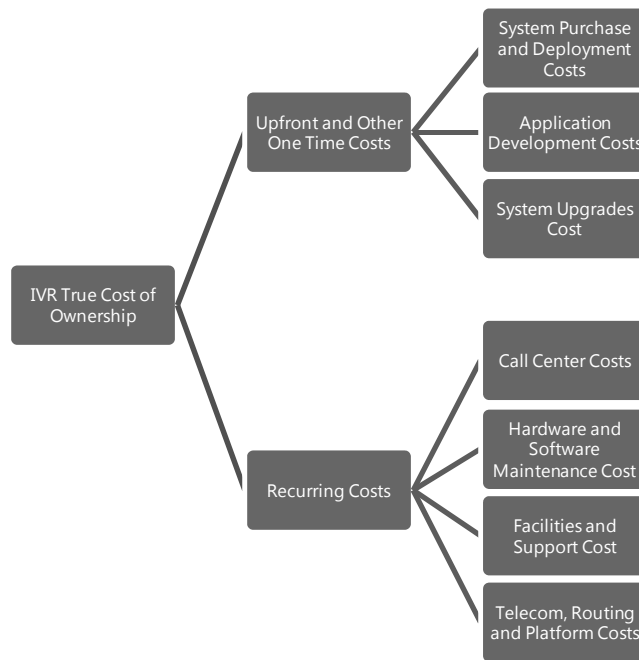


Figure 1: Cost categories to capture TCO of an IVR solution

The deployment model (premise-based or on-demand) will determine the relative impact of these cost elements on the overall ownership cost. When comparing two or three systems with different architectures, it is critical to include cost categories that are normally left out when comparing two systems under the same deployment model. For example, the costs of data center facilities and IVR management/monitoring are comparable between different vendors of premise-based IVR systems and so would not normally be included when evaluating two premise-based alternatives. However, because an on-demand solution such as Tellme eliminates the need to install and manage IVR hardware, these support costs vary significantly from premise-based costs, and must be included when computing the financial benefits.



On-Demand IVR Platforms - Cost Savings and Business Value

On-demand IVR platforms provide significant savings in both upfront costs and recurring costs when compared to traditional premise-based IVR solutions. With on-demand platforms, many upfront investments are reduced or eliminated, enabling businesses to focus resources on delivering a superior caller experience and driving more value out of the phone channel. In this section, we describe how on-demand IVR platforms drive cost savings and business value, using Tellme as a representative example of a market-leading on-demand IVR platform.

Savings in Upfront and Other One-Time Costs

Tellme provides significant savings in upfront hardware and software costs, application development costs, and IVR upgrades, while consistently investing in refreshing its platform to ensure customers immediately benefit from advanced technologies.

- **Eliminate upfront CapEx investments:** Tellme does not require any upfront investment in costly IVR hardware and software (including speech recognition and text-to-speech licenses), thereby providing significant CapEx savings in system purchase and installation costs and subsequent major system upgrades.
- **Eliminate the expense, time, and pain of upgrades:** Tellme maintains an evergreen platform with frequent hardware and software upgrades. Perhaps most importantly, these upgrades are transparent to the customer and do not require downtime or additional cost. In contrast, with premise-based solutions, IVR upgrades are costly, time consuming, and prone to business disruptions.
- **Reduce application development costs:** The cost, effort, and time required to market, develop, and deploy standards-based VXML applications on the Tellme platform are significantly lower as compared to applications developed using proprietary technology that is often used in traditional premise-based IVR systems. Tellme's open-source Internet standards-based application architecture eliminates the need to hire expensive developers who specialize in outdated, proprietary IVR technologies. Additionally, applications developed on the Tellme platform can re-use existing web APIs to back-end CRM and other systems, eliminating the need to develop and maintain duplicate web and IVR interfaces.



Upfront and Other One-Time Costs

Cost Category	Cost Element	On-Premise IVR	On-Demand IVR (Tellme)*
System Purchase and Installation Costs	IVR hardware and software	\$ -	Included
	Speech recognition engine licenses	\$ -	Included
	TTS engine licenses	\$ -	Included
	Back-end integration software licenses	\$ -	\$ -
	Enhanced reporting packages	\$ -	Included
	Remote monitoring and management software	\$ -	Included
	Additional back-end integrations	\$ -	Web APIs
	Data connectivity infrastructure	\$ -	\$ -
	Telecom connectivity infrastructure	\$ -	\$ -
	IVR configuration and rollout costs	\$ -	\$ -

Application Development Costs	Applications design, development, implementation, testing, and rollout	\$ -	\$ -
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Planned System Upgrades	Upgrade core IVR hardware	\$ -	Included
	Upgrade core IVR software licenses	\$ -	Included
	Upgrade core speech engine licenses	\$ -	Included
	Upgrade TTS engine licenses	\$ -	Included
	Configuration and Installation of upgrades	\$ -	Included
	Required application updates (compatibility)	\$ -	Included
	Application redeployment costs (test, rollout etc)	\$ -	n/a

* *Included* indicates no extra charges beyond usage-based platform fees

Savings in Recurring Costs

Tellme reduces recurring hardware / software maintenance costs, support and facilities costs, and carrier-based prompter costs by providing a highly reliable on-demand solution that is easier to manage.

- Eliminate hardware / software maintenance costs:** Tellme eliminates the need to pay IVR maintenance charges (typically 18-22% of purchase price). Not only does Tellme handle system maintenance, it regularly refreshes the platform to offer the latest technology without the pain of costly upgrades.
- Reduce support personnel costs:** By using Tellme, resources for IVR support and 24x7 monitoring personnel, typically required for on-premise solutions, can be reduced or redeployed to perform higher value add tasks.



- **Reduce application maintenance costs:** Tellme enables customers to host VXML applications within the customer's data centers (or hosted through a provider of the customer's choice) providing full application security and control, as well as easier manageability through web-based management tools.
- **Reduce Facilities Costs:** Tellme provides multiple, geographically isolated, fully redundant data centers, eliminating the need for customers to incur facilities costs associated with hosting the IVR (e.g., data center space, power, cooling).
- **Reduce agent costs and call duration with increased full and partial automation:** Higher full automation rates reduce the need for agent support for routine inquiries (agent deflection). Partial automation helps ensure that information captured by Tellme is available to the agents through rich screen pops, reducing agent handling time. This higher level of full and partial automation helps reduce the number of agents, or allows redeploying them on higher value added tasks, such as handling more complex customer inquiries. It also reduces the call duration enabling callers to receive information faster and reduces transport costs.
- **Reduce costs of misdirected calls:** Tellme increases call routing accuracy by better understanding and capturing caller needs, thereby reducing costs of misdirected calls. This savings has two components: (1) Reduction in transfer connect fees incurred in transferring the call to the wrong agent and then back to the correct agent, and (2) Elimination of agent handling time to respond to the call before redirecting it to the correct agent.



Recurring Costs

Cost Category	Cost Element	On-Premise IVR	On-Demand IVR (Tellme)*
Call Center Costs	Agent cost	\$ -	\$ -
	Inbound telecom trunks costs	\$ -	\$ -
Hardware / Software Maintenance	Annual IVR hardware / software maintenance	\$ -	Included
	Annual applications maintenance	\$ -	\$ -
	Tellme platform charges	n/a	\$ -
	Re-tuning common grammars	\$ -	Included
	Extending bulk audio libraries	\$ -	Included
	Acoustic model adaptation	\$ -	Included
Support and Facilities	IVR operations support personnel	\$ -	Included
	Active, 24x7 monitoring personnel	\$ -	Included
	Proprietary application dev and maintenance personnel	\$ -	n/a
	Open-standards application development and maintenance personnel	\$ -	\$ -
	IVR data center facilities (space, power, cooling)	\$ -	Included
	App hosting data center facilities (space, power, cooling)	\$ -	\$ -
Telecom and Routing Costs	Carrier based network prompter costs	\$ -	n/a
	Transfer connect / takeback and transfer charges	\$ -	\$ -
	Tie line routing charges	\$ -	\$ -
	CTI connectivity (data-dips)	\$ -	\$ -
	Geographically diverse SONET ring (Carrier Connectivity)	\$ -	Included
	Cost of misdirected calls	\$ -	\$ -

* Included indicates no extra charges beyond usage-based platform fees



Additional Benefits

In addition to reducing upfront infrastructure costs and IVR maintenance and upgrade costs and headaches for customers, Tellme offers numerous additional benefits, providing even more value over time:

- **Maintain an “always-on” service even on the busiest day of the year:** Tellme’s 99.995% availability platform, multiple geographically isolated, fully redundant data centers, and provisioning of on-demand capacity ensures that all calls are serviced, even during unpredicted spikes.
- **Avoid overspending on capacity or under-allocating capacity:** Tellme offers a “pay-as-you-go” model, eliminating the need to invest in costly excess capacity (over-allocation) or miss calls due to insufficient capacity. Tellme monitors aggregate peak capacity on the platform and builds new capacity to ensure calls are answered, even during peak usage. With on-premise solutions, businesses need to provision capacity to handle the peak call volume on the heaviest traffic day, even though most of the excess capacity remains idle at other times. Otherwise, they risk missing calls or overloading contact centers and incurring expensive agent costs.
- **Increase self-service adoption through a superior caller experience and improved speech effectiveness over time:** With its industry-leading user interface and application design expertise, Tellme delivers a superior caller experience that makes it easy for callers to stay in the IVR. This leads to greater customer adoption and reduced opt-out to agents. In addition, the 10+ billion utterances heard by Tellme each year help Tellme improve speech recognition performance over out-of-the-box recognizers, which in turn yields higher adoption and automation rates. These network benefits are nearly impossible to implement for a standalone customer, but all Tellme customers share the benefits of this continuous refinement and improvement of the platform at no additional charge.
- **Highly reliable carrier connectivity:** Tellme uses a geographically diverse SONET fiber ring to provide carrier connectivity. This avoids the need to deploy redundant inbound trunks or procure them through multiple carriers to achieve reliable carrier connectivity. The cost of a dedicated, geographically diverse SONET ring is impractical for most premise-based solutions.
- **Increase savings with VoIP:** Tellme’s support of VoIP-based carriers enables customers to deploy advanced capabilities such as allowing callers to access voice services via either a toll free number or local number. Local number support, for example, enables customers with distributed businesses to develop revolutionary business models such as centralized ordering while reducing costs. These capabilities give businesses new ways to reduce costs without sacrificing call quality.



Customer Successes

Tellme customers have seen significant financial and performance benefits immediately upon switching to Tellme's on-demand platform. In this section, we present two representative examples of benefits received when switching from a premise-based to on-demand IVR. Even after the initial switch, their ROI continues to grow through the Additional Benefits described in the previous section.

Leading Financial Services firm

A leading financial services firm with high call volume had more than 10 disparate legacy touchtone applications that resulted in a disjointed caller experience, low call resolution rates and higher number of agent-handled calls. Additionally, the on-premise infrastructure required complex integrations and maintenance and suffered from low availability. There was a critical need to achieve carrier-grade reliability and reduce capital expenditures. Tellme delivered a state-of-the-art speech solution that unified all the different applications onto a single platform, making customer service better for both the business and the customers.

Key Benefits:

- Eliminated millions of dollars of annual infrastructure costs, resulting in significant savings
- Achieved significant automation rate improvements, especially for highest volume applications, reducing agent-handled volume and generating significant savings
- Improved the quality of self-service caller experience by streamlining authentication and navigation

Leading Healthcare Services firm

A leading healthcare services firm had call volumes that fluctuated considerably during the year with major spikes during the open enrollment period. This made it extremely difficult to allocate capacity accurately. In addition, the low automation rate and poor caller experience resulted in higher opt out to agents, even for routine tasks. A significant percentage of calls were misrouted due to poor user interface design, leading to increased agent costs. Tellme developed a comprehensive, integrated solution for checking coverage options and status of claims and significantly improved the caller experience.

Key Benefits:

- Realized annual multi-million dollar reduction in agent costs due to increased automation and more accurate call routing
- Achieved dramatic increase in system reliability and scalability



Conclusion

Tellme enables businesses to deliver a superior caller experience and reduce the cost owning an IVR solution. By reducing or eliminating high upfront infrastructure costs, on-going maintenance costs, and upgrade costs while delivering significant benefits, Tellme helps businesses realize significant value from their investment. With Tellme, businesses can solve the caller experience and cost savings dichotomy – and focus on serving their customers.

To learn more about the Tellme solution and access case studies, industry leadership reports and hear customer audio samples, visit www.tellme.com.

