



Building IVR Solutions

2015 Survox Summit

# Building on the Survox Platform



## Why is this important to you?

- Traditional inbound and outbound calling
- Transfers from external call centers for customer sat surveys
- Integrated workflow for optimized call center operations

## Agenda

- Review use cases for IVR implementations
- Best Practice tips for IVR projects
- Technical examples for different use cases
- How to integrate IVR in to CATI operations

## Presenters

- Jerry Pavia, Professional Services Developer
- Allen Porter, Director of Customer Success

A background image featuring a network diagram with various nodes (circles and squares) connected by lines, set against a light blue gradient. The diagram is centered around a black horizontal band containing the text.

# Why IVR?

# IVR Reaches

84% US adults  
have internet access

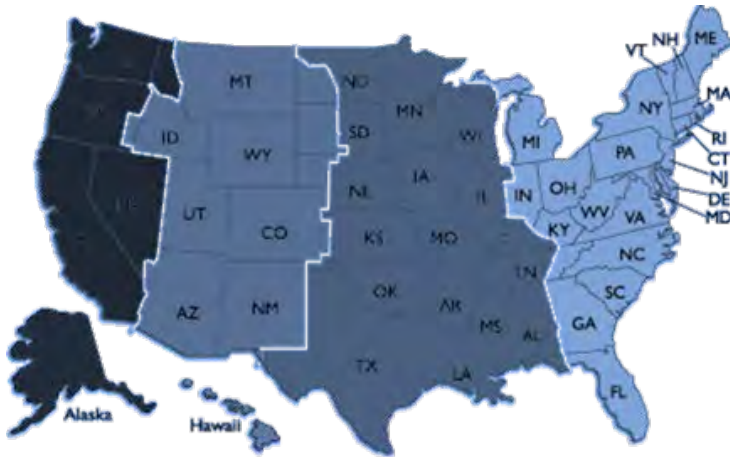
## Who are you missing?

1 in 2  
Seniors

1 in 5  
Minorities

1 in 4  
Lower Socio-  
Economic

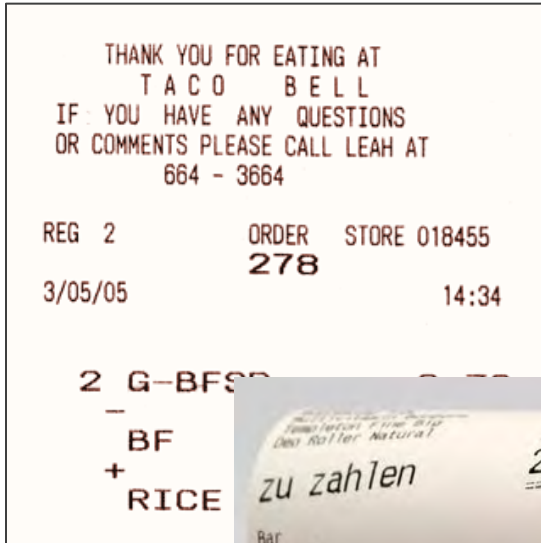
1 in 5  
Rural Residents



... phone  
reaches everyone

<http://www.pewinternet.org/2015/06/26/americans-internet-access-2000-2015/>

# Increase Response | Expand Reach



## URL + 800#

↑ 15% higher overall

↑ 75% more Seniors

↑ 25% more customers who are...

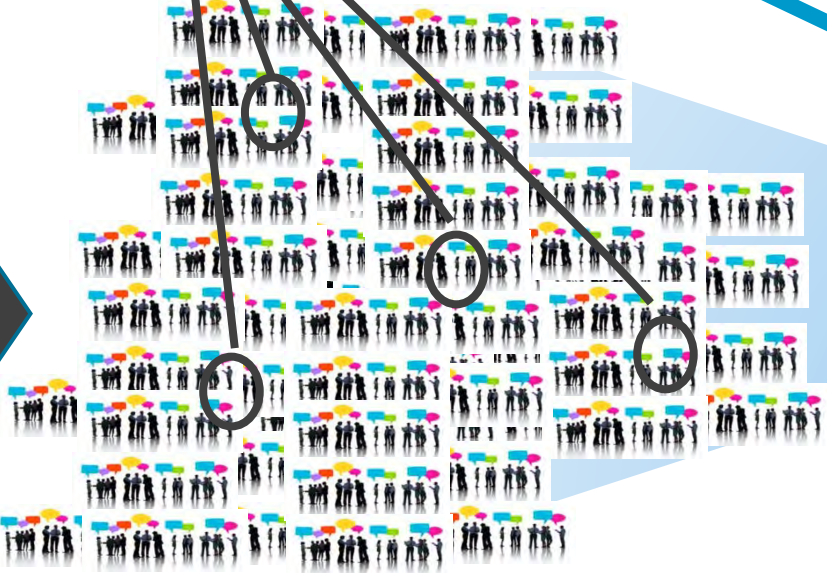
- High school only
- Rural resident
- Lower income

# IVR Targets & Recruits



**PULL**

**PUSH**

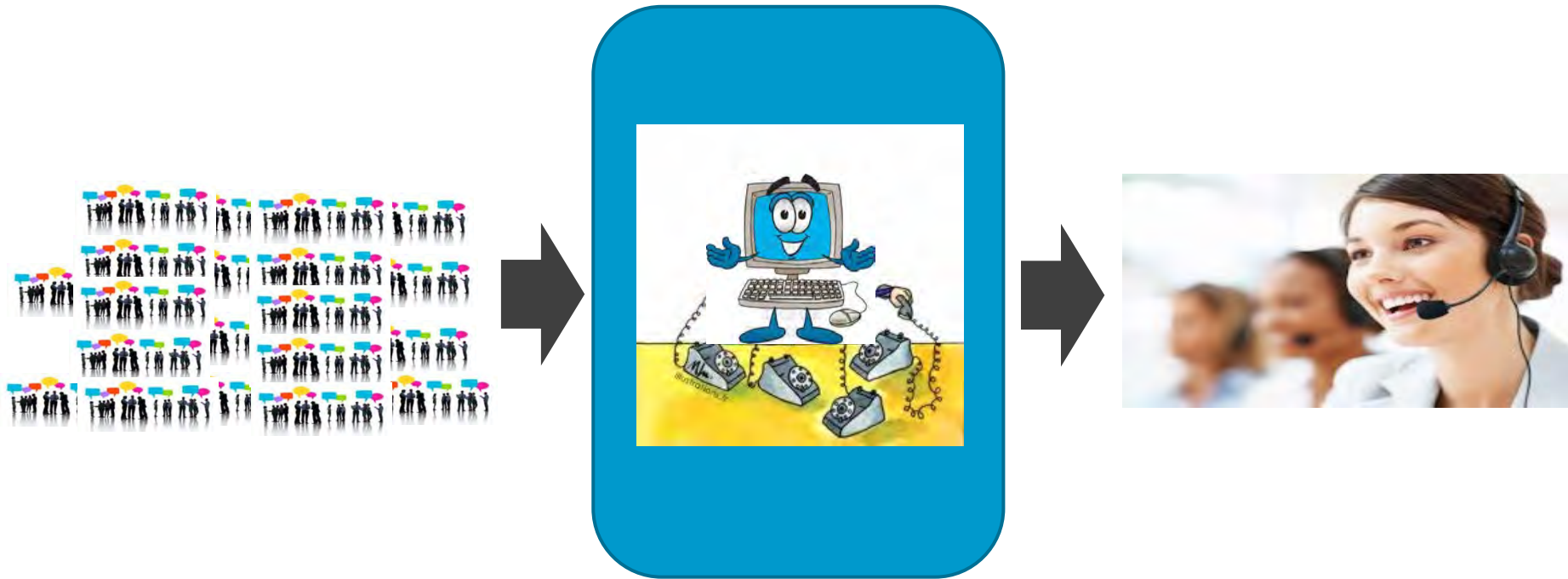


URL

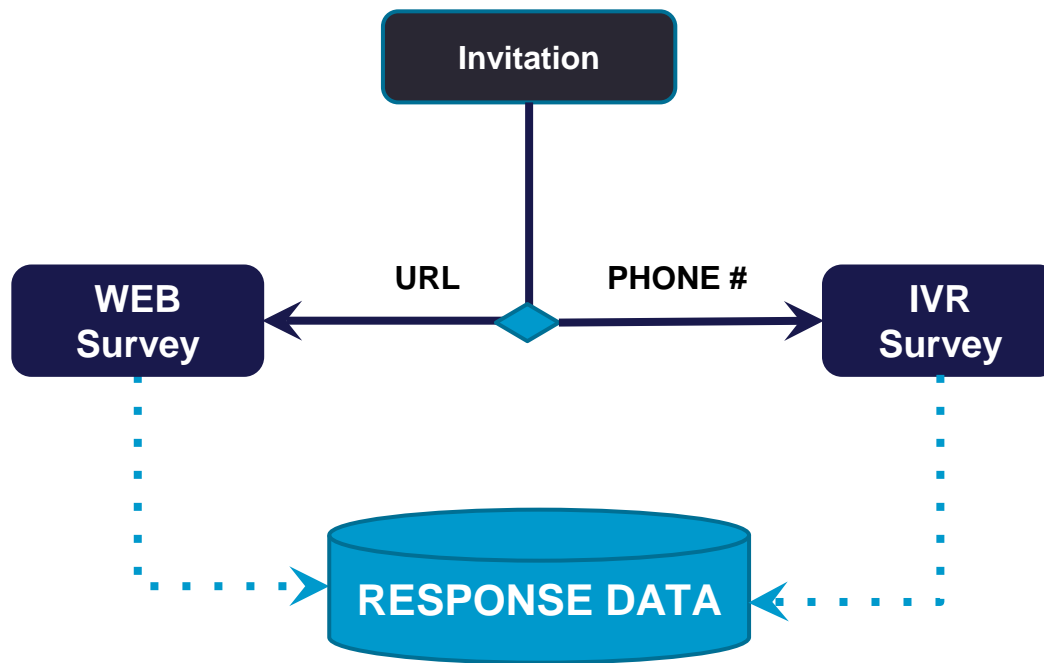
**SURVEY**

# IVR

## Answers, Screens, Interviews, Transfers



# Offer Engagement Choices





# IVR & the Enterprise

- Choice of mode for broader collection of insight
  - Multi-mode: invite respondents to participate online or via IVR
  - Example: Print both an 800# and a web survey URL on store receipt

**URL + 800#**



- Post-Transaction service satisfaction survey

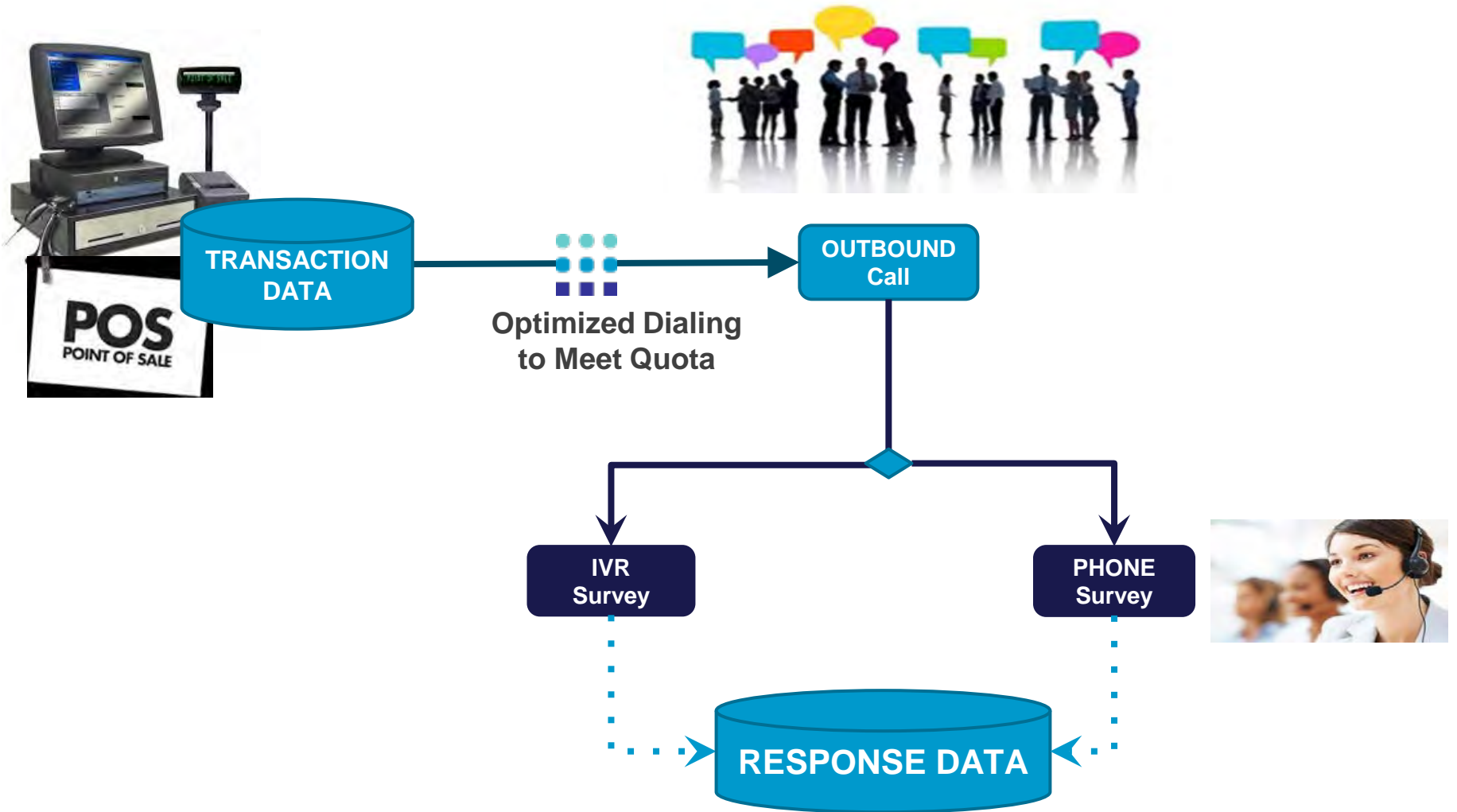
- Outbound: call back x hours or days following an interaction
- Inbound: receive direct calls to a toll free number
- Transfer: transfer calls (all or some) to an IVR survey following a customer service interaction



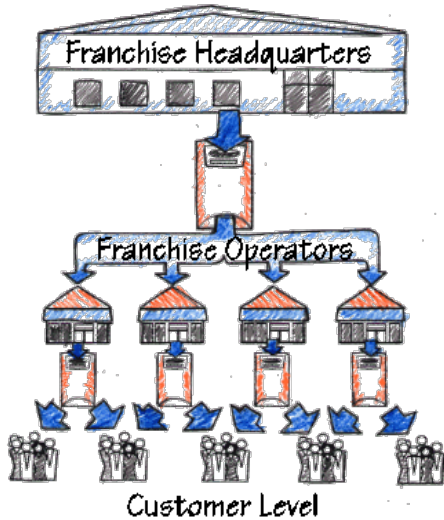
➔  
Agent transfer to IVR

**IVR  
Survey**

# Solicit Feedback from Representative Sets



# Organizational / Hierarchy Designs



## SET QUOTA...

Per agent  
Per store  
Per region  
Per day



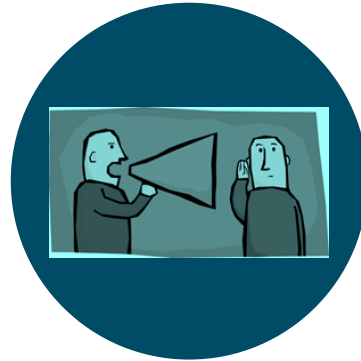


# EMPLOYEES



## Workforce Development

Key Employees  
In-Depth Drill Downs



## Employee Feedback

Choice of Modes  
Proactive Sampling



## Exit Interviews

Key Employees  
Strategic Functions

# Survox™ Dialer + IVR

## POWERFUL

- IVR and Blended Studies
  - Pre-integrated with Study Server
  - Out-bound, In-bound and Blended
  - Automated Outbound Dialing for call blasting
- Dual-stream recording
  - Record all or part of an interview.
  - More flexibility for managing verbatims
- Audio Playback
  - Playback audio files during an interviewer for feedback.

## COST EFFECTIVE

- Increased interviewer productivity
  - Predictive dialing reduces waiting
  - In-bound/out-bound flexibility optimizes shop resources
- Lower infrastructure cost
  - Single server for study & dialer
  - Scalable to 200+ stations
  - Optional hosting by CfMC leverages operational efficiencies
  - SIP (VOIP) can lower telecom cost.

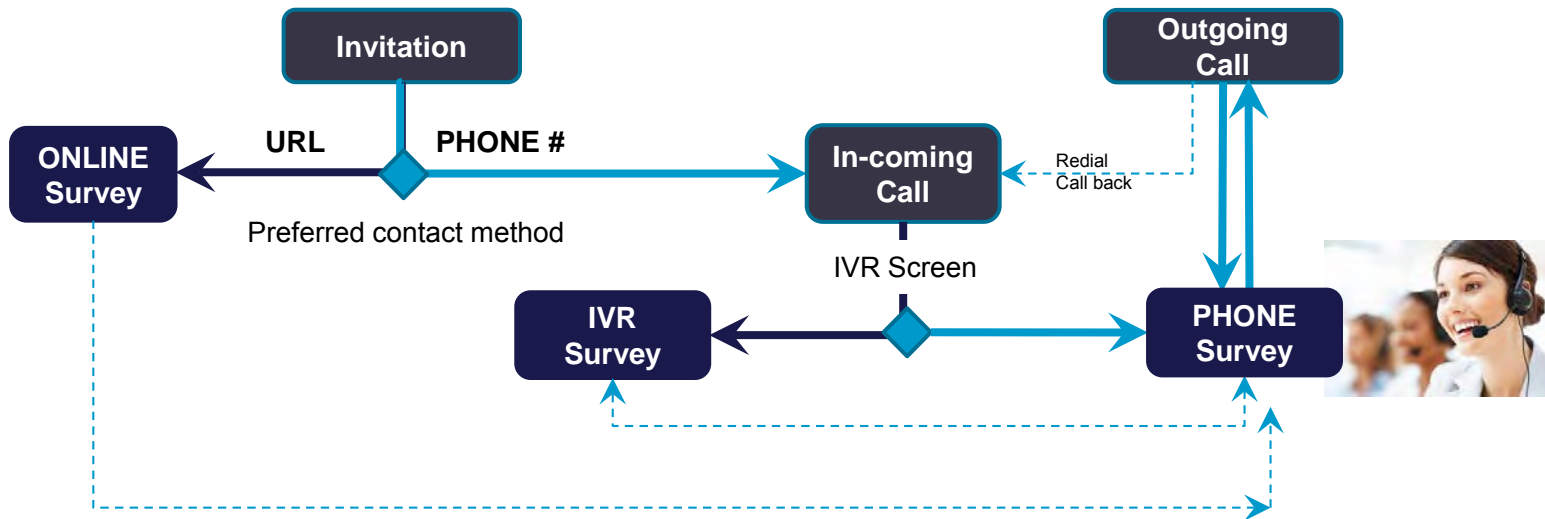
# IVR Executes Advanced Logic



- **Quota Attainment**
  - Tracks Market & Demographic based goals
- **Sample Management**
  - Directs dialer activity
  - Optimizes cost – time trade-off
- **Integrated Workflows**
  - Blends in-bound & out-bound call traffic
  - Takes feeds from HR, CRM, POS , etc.
  - Enables hybrid survey design across modes

# Platform Enables Mixed Mode Data Collection

Sample



# Survox IVR Options

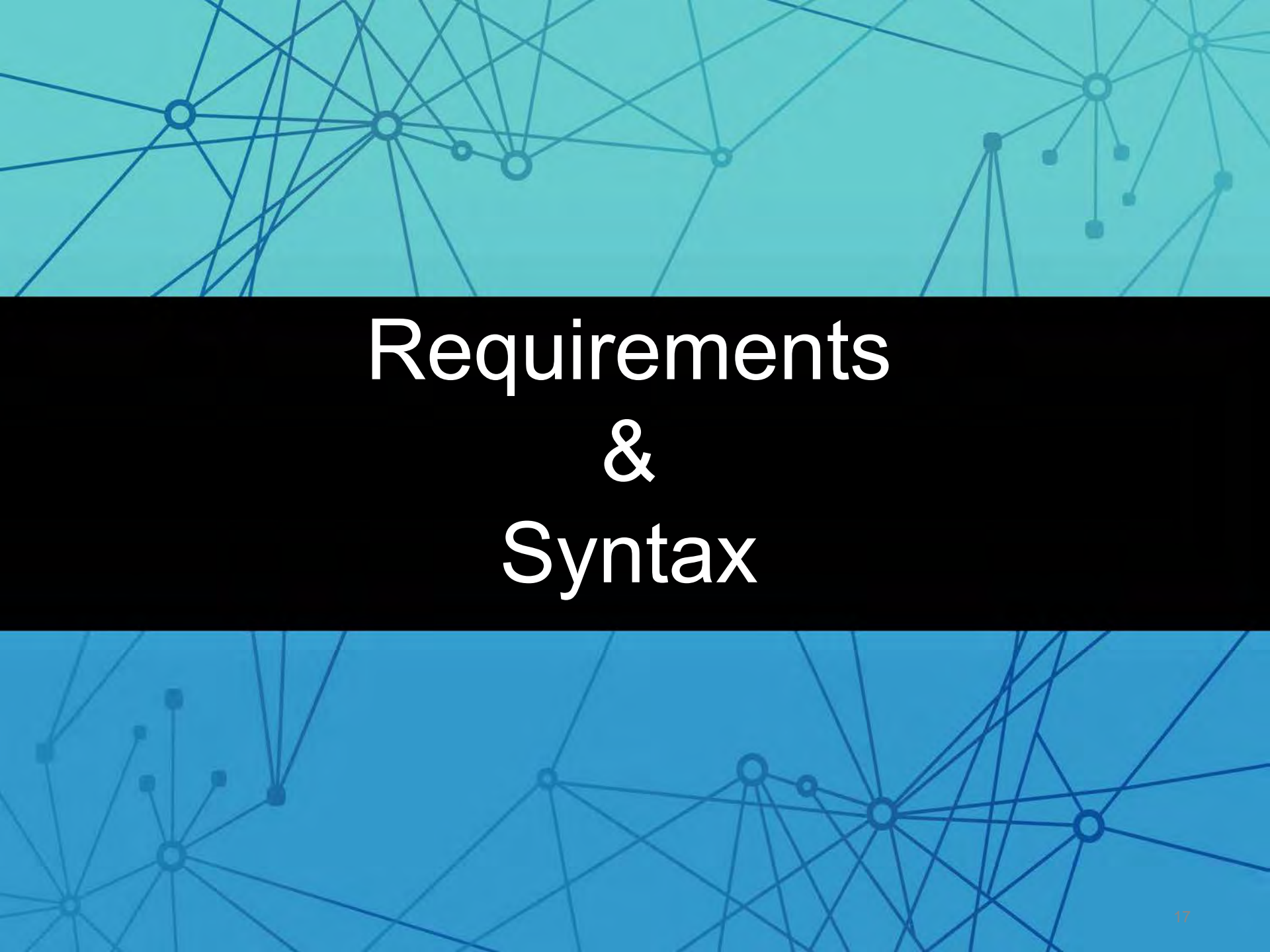
## INBOUND

- Respondents
  - Call in at their convenience
  - Be transferred from an agent
    - Example: Support Call follow-up
- Study
  - Open or closed

## OUTBOUND

- Respondents
  - Listed, RDD or purchased sample
  - Transaction triggered
- Dialing logic
  - Follows the normal dialing rules
  - Customizable



A background of a network diagram with nodes and connecting lines in shades of blue. The nodes are represented by circles and squares of varying sizes, connected by thin lines. The overall pattern is a complex web of connections.

# Requirements & Syntax

# Requirements & Best Practices

---

- Requirements
- Header
- IVR block
- IVR\_Response block
- ANI & DNIS
- Sound File Management

# Requirements

---

- Survox Dialer
- Survox 8.8+ software
- Licensing to support
- Telco

# Header

---

You are able to use your normal header, but need to add “studytype”

## **INBOUND**

```
[@study,&  
CASE_LENGTH=32000,&  
CASE_ID=1.10,&  
COMMENT="Inbound Study",&  
studytype=IVRINBOUND]
```

## **OUTBOUND**

```
[@study,&  
CASE_LENGTH=32000,&  
CASE_ID=1.10,&  
COMMENT="OutBound Study",&  
MAXIMUM_QUOTA_NUMBER=30000,&  
TRIPLE_QUOTAS,&  
ALLOW_UNSET_QUOTAS,&  
studytype=IVROUTBOUND]
```

## **BLENDED**

```
[@study, caselength=5000, comment="Blended Survey Test", &  
studytype=blended]
```

# IVR Block

---

This is REQUIRED for all IVR Studies. You need to put the start the block before the first question and close it after the last question of the survey.

```
{!ivr_block}
```

SURVEY

```
{!end_ivr_block}
```

# IVR Response Block

Option	Description
Time_Out	The timeout option defines what the timeout is and what to do when it is encountered.
Pound_Sign_Only	Defines what to do when the respondent just hits the pound sign with no data before it
Invalid_Entry	Defines what to do when an invalid entry is received
Star	Says what to do when the Star key is entered
Allow_Interrupt	Sets whether data entry is accepted while the sound file is playing
Play_Beep_Before_Record	Says whether or not to play a beep before the system starts to record on a sound,record statement

```
{!ivr_response=  
time_out =          (repeat = 2, error_message = not_understand_f, result_message=thanks_f, length = 5,  
result=term),  
pound_sign_only = (repeat = 2, error_message = not_understand_f, result_message=thanks_f, result=term),  
invalid_entry =    (repeat = 2, error_message = invalid_resp_f,   result_message=thanks_f, result=term),  
star =              (result = REPEAT),  
allow_interrupt=yes  
}
```

# IVR Response Block

## Sub-Options for Time\_Out, Pound-Sign\_Only and Invalid Entry

Sub-Option	Description
Length	Length of timeout in seconds (values can be 5-600) default is 120. The timer starts when the outbound sound file finishes.
Repeat	Number of times to ask the question. (values are 1 to 99) set it to 1 to only ask the question once. Default is 3.
Result	What to finally do if the number of repeated items is met. Values can be one of the codes from the response list or keywords TERM or LAST. Default is term.
Result_Message	Name of sound file to play before the result is executed. Default is nothing.
Error_Message	Name of a sound file to play. Default is nothing.

# IVR Response Block



## Sub-Options for Allow\_Interrupt and Play\_Beep\_Before\_Record

<b>Allow_Interrupt Sub-Option</b>	<b>Description</b>
Yes	Allows user to enter data while out-going sound file is playing.
No	Does not allow data entry until the out-going sound file has finished playing. Default is No.

<b>Play_Beep_Before_Record Sub-Option</b>	<b>Description</b>
Yes	Will play a beep before recording starts. Default is Yes.
No	Does not play a beep before recording starts



# IVR Response Block



## Sub-Options for Star

Sub-Option	Description
Error_Message	Name of a sound file to play. Default is nothing.
Result	<p>What to do when the star is entered. Keywords are:</p> <p>REPEAT_question which replays the question. TERMinate which goes to the terminate block. BACKUP which goes back one question. LAST chooses the last response on a FLD question or the last alternate answer on a NUM. Can also be one of the valid items on the list.</p> <p>Default is REPEAT.</p>

# ANI and DNIS



"" ANI and DNIS

These variables will go after the !expr,,Dialer() expression.

The ANI is the number that the respondent called in on.

The DNIS is the number that the respondent called

```
{DialType: .1 !Expr,,Dialer() }
```

```
{ani: .10 HIDE !num } " when someone calls in, this will be filled  
" with the number from which they are calling
```

```
{dnis: .10 HIDE !num } " and this will be filled with the number they  
" called
```

# Sound file Handling

```
{!ivr_response=  
time_out = (repeat = 1, length = 30, result=0),  
pound_sign_only = (repeat = 1, result = 0),  
star = (result = 0),  
allow_interrupt=yes  
}
```

```
{Q6a:
```

Please share with us your comments after the tone.

```
\- Then press the pound key.\*
```

```
!DISP, NOWAIT }
```

```
{Q6aFN: .50
```

```
[PUT NAME OF SOUND FILE HERE]
```

```
!spc,9 }
```

```
{Q6a_name:
```

```
!SOUND, RECORD, q6afn
```

```
}
```

```
{!sound,s}
```

# IVR Voice File Creation

- Survox Dialer
- Software Generated
- In-House recordings
- Professional Recordings
  - Gender
  - Dialect
- Multilingual Recordings
  - Translation Service

# Summary

- ❑ Must use question types only suitable for IVR interviewing
- ❑ Every data question must have a label
- ❑ Questions that can be answered by pushing the 12 buttons on a standard touch-tone phone are allowed
- ❑ !FLD questions with the responses limited to 0-9 (and H for respondent hung up)
- ❑ !NUM questions without decimal places
- ❑ !DISPLAY questions
- ❑ !VAR!/TEXT are not allowed in the IVR Block and will produce a compile error.
- ❑ If you need to capture an open end question you can use a SOUND,RECORD after playing the instructions, the respondent can then give the response and press # to continue.
- ❑ Studytype= is required as a study header option
- ❑ {!IVRBLOCK} is used in all 3
- ❑ {!IVR\_RESPONSE} is used in all 3
- ❑ {!DISPLAY, NOWAIT} is used in all 3 and will play a file named the question label and then will continue onto the next question.
- ❑ Blended uses the !PHONE, GETHELDIN function: Checks for a waiting call and connects that call to an interviewer
- ❑ QFF must be named <studycode>.qff or <studycode>\_ivr.qff
- ❑ Inbound uses an empty fone file
- ❑ Outbound and Blended use real sample
- ❑ Load studies as usual once all live files are ready

A background graphic consisting of a network of interconnected nodes and lines. The nodes are represented by small circles and squares, some of which are highlighted in white or light blue. The lines are thin and light blue, creating a complex web-like structure. The overall color scheme is a gradient of blues, from a darker blue at the top to a lighter blue at the bottom.

# IVR Work Flows

Inbound | Outbound | Post Surveys | Blending

# Survent® Platform – The Engine Behind Survox IVR

## Study Controls

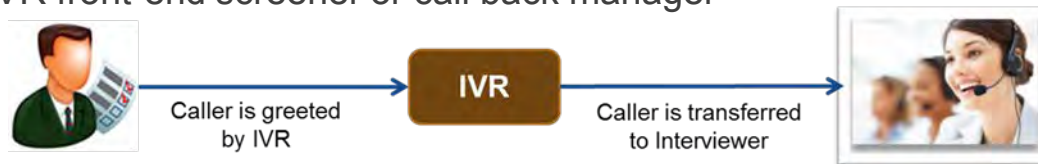
- Sample Preparation
  - Integration to panel sources
  - DNC
  - Cell phone management
  - Random Digit Dialing
  - Call schedule optimization
  - De-dup
- Quota Optimization
  - Check quota attainment
  - Analyze productivity rates per quota cell
  - Manage N markets, Y tiered structures

## Call Center Automation

- Interviewer Productivity
  - Optimize ROI from interviewing hours
    - Connected calls routed to interviewers
    - Transfer between stations, to other modes, to external orgs
- Operational Control
  - Sample fed to Survox Dialer
  - IVR integration
  - Call blending to nurture & capture Inbound calls
  - Data capture via dual track recording for ease of transcription

# IVR Integrates into Operational Workflows

- Optimize call center workflows → Let IVR intelligently route callers
  - Use an IVR front-end screener or call back manager

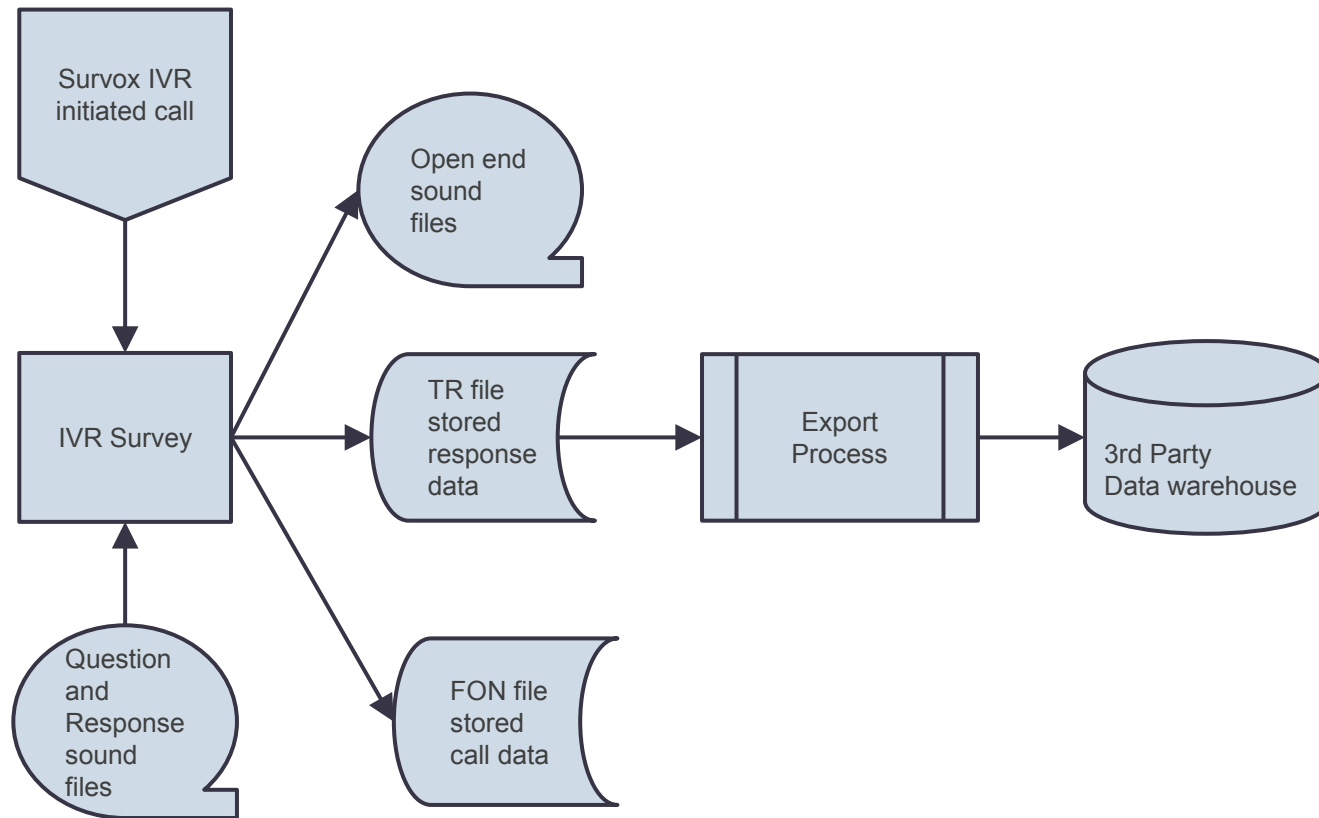


- Unlock your research design → Multiple modes within a survey
  - Create hybrid surveys across Phone & IVR
    - Complete a portion of the survey with an interviewer.
    - Transfer caller to IVR to record open ends or private/sensitive information





# Outbound



# Outbound Syntax

---

Header (studytype=outbound)

Get Phone Number

Check Targets/Markets

Dial Phone Number

{!ivr\_block}

{!ivr\_response= }

SURVEY

Increment Quotas

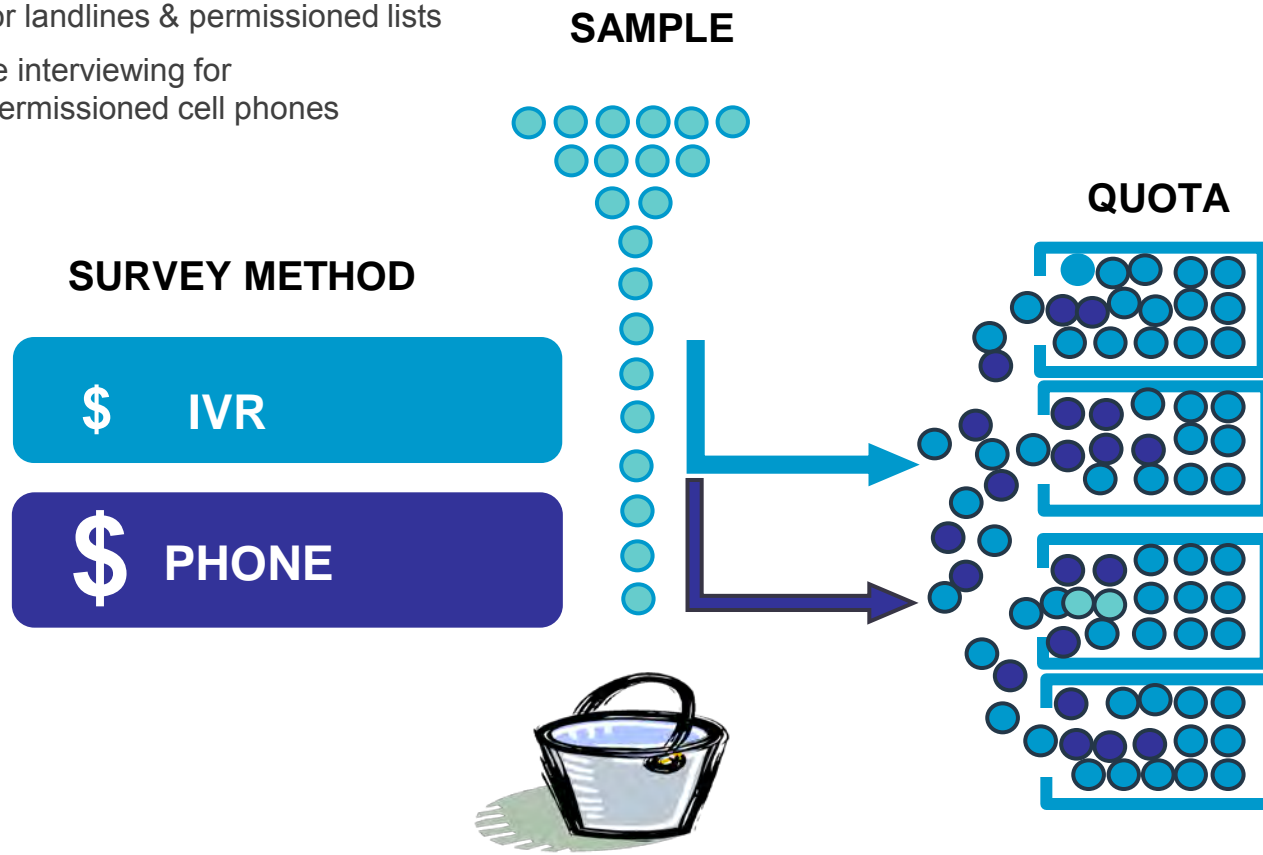
Terminate block

{!end\_ivr\_block}

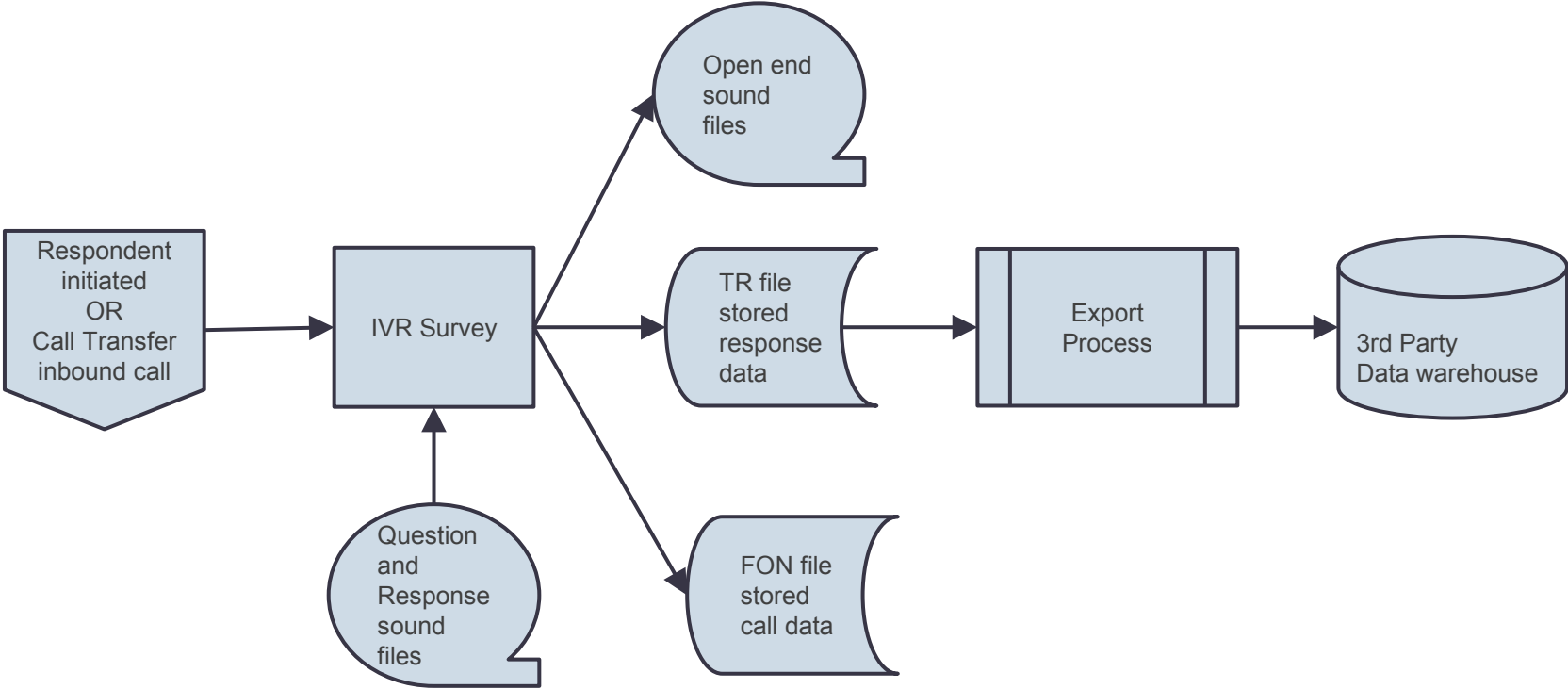
~end

# Using Least Cost Method First to Complete Quota

- Split sample files between Phone & IVR to lower study costs
  - IVR for landlines & permissioned lists
  - Phone interviewing for non-permissioned cell phones



# Inbound and Call Transfer



# Inbound Syntax

---

Header (studytype=inbound)

ANI/DNIS loaded

{!ivr\_block}

{!ivr\_response = }

SURVEY

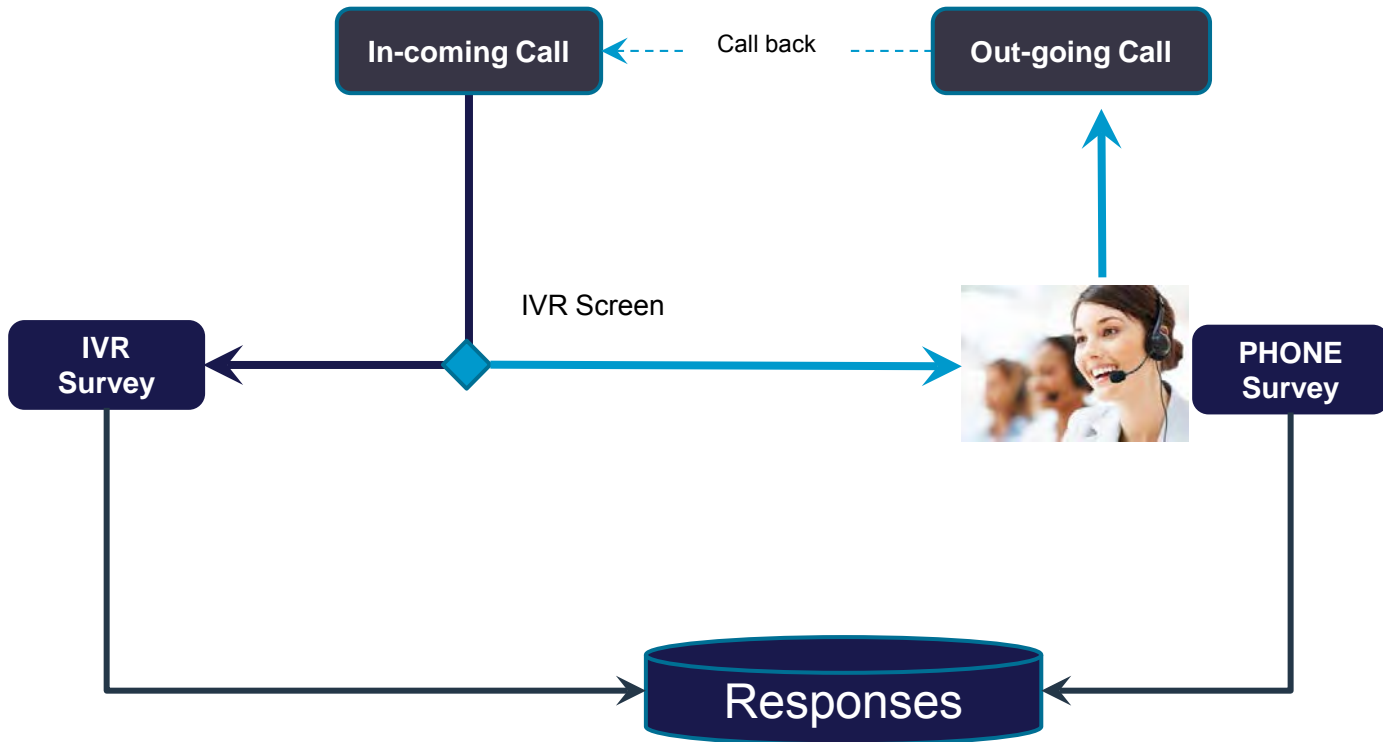
Terminate block

{!end\_ivr\_block}

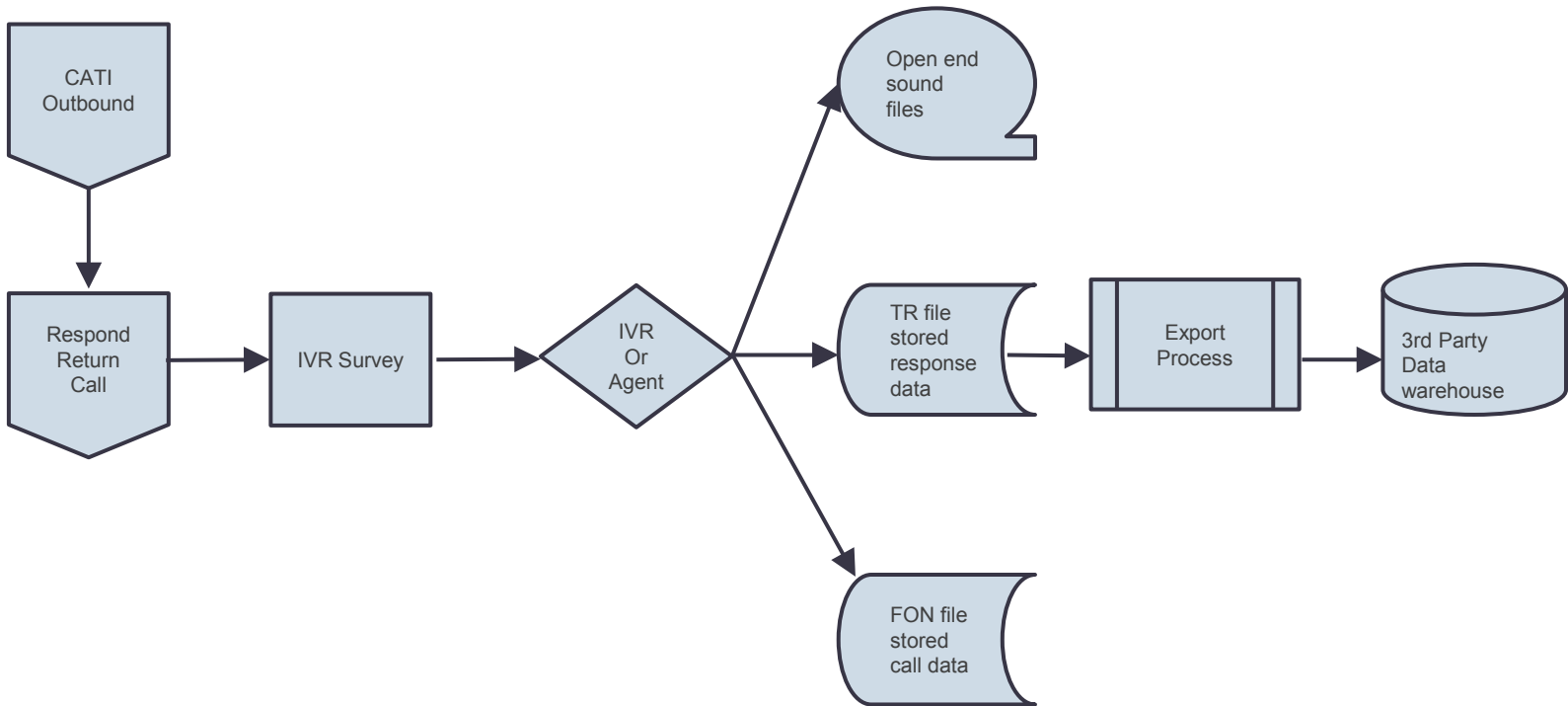
~end

Note: Do quota checking inside ivr\_block.

# Phone-based Data Collection



# Call Blending



# Call Blending Syntax

---

Header (studytype=blended)

ANI/DNIS

{!phone, GETHELDIN}

Get Phone Number

Check Quotas for Webcati/IVR Transferred call

Dial Phone Number

Intro for IVR transfer

Intro for WebCati

WebCati SURVEY (skip over IVR at end of this block)



# Call Blending Syntax

---

{!ivr\_block}

{!ivr\_response = }

Would you like to continue this survey with live agent

IF Yes, {!phone, SAVEHELDIN} and play Music loop

If No, check quotas

IVR SURVEY

Increment quotas for IVR SURVEY

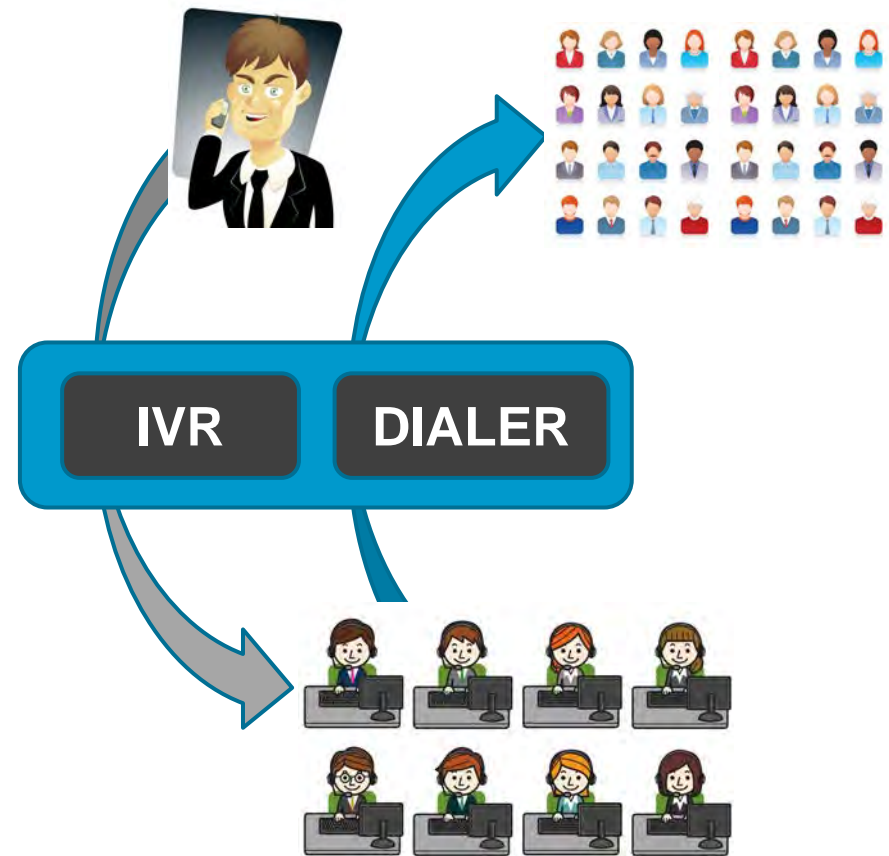
Terminate Block

{!end\_ivr\_block}

~end

# In-bound & Out-bound Call Blending

- IVR intelligently handles caller
  - Greets caller
  - Identifies study
  - Lookups inbound number to identify respondent
  - Transfers to next available, appropriate agent
- Convert callbacks
  - Seamlessly blend inbound calls into interviewer queues
  - No need to dedicate resources to answer calls



The background of the slide features a network diagram with various nodes and connecting lines. The top and bottom sections are light blue, while the middle section is black. The nodes are represented by circles and squares of different sizes, connected by thin lines. The central text 'Use Cases' is written in a large, white, sans-serif font.

# Use Cases

# Use Case:

## Enhance the Respondent Experience and Get Better Feedback

In-Store	Immediate	Post-Transaction Feedback
Feedback URL + 800 # on receipt or invitation	Calls are transferred from an agent	Outbound calls to customers following an interaction
Example: Retailer Seeking Feedback	Examples: Service Provider, Customer Support, Pharma, Medical/Hospital Visits	Examples: Sales, Marketing, Customer Support, Feedback
Benefit: Increases respondent interaction by offering another vehicle for response	Benefit: IVR removes interviewer bias.	Benefit: Drive towards and reach quota Gather performance feedback on agents.

# Use Case:

## Offer More Choices & Improve Customer Satisfaction

Ad-Hoc Surveys	Customer Satisfaction, New Product Testing, Polling & Academic Research
Examples: Marketing and Sales	Examples: Market Research Organization, Polling Company, University Research Group
Invitation asks for opinion via URL or 800#	Phone outreach for time or quota-sensitive study – Use IVR as a front-end screener.
Benefit: Provides multiple ways to interact – lets the respondent choose.	Benefit: Reach respondents quickly who may not be available online. Record open-ended questions.

# Use Case: Reminder Call

Respondent Reminder	Customer Satisfaction, New Product Testing, Academic Research
Examples: Web, Mail, Diary surveys	Examples: Market Research Organization, Corporate Research Dept
Benefit: Provide quick, inexpensive, and other mode contact	Improve overall response rates.

# Use Case:

## PreRecruited to IVR



Recruit to IVR	Customer Satisfaction, Academic Research, Specific Demographics, Health & Social behavior
Examples: CATI and In-Person recruit	Key demographic recruitment; International
Benefit: Expensive Recruit & Cost-Effective data collection	Save money; Improve overall response rates especially for sensitive survey topics.

# Use Case:

## IVR-Only Voter Opinion Study

---



### Survox IVR Reduces Costs while Meeting Time-Critical Deadline

Conducted 400 interviews in 2 days on 2 studies exclusively done by IVR, saving clients labor costs associated with interviewers — about 60 to 65 percent of the cost of the study.

Can grow its business by scaling beyond the number of interviewers available

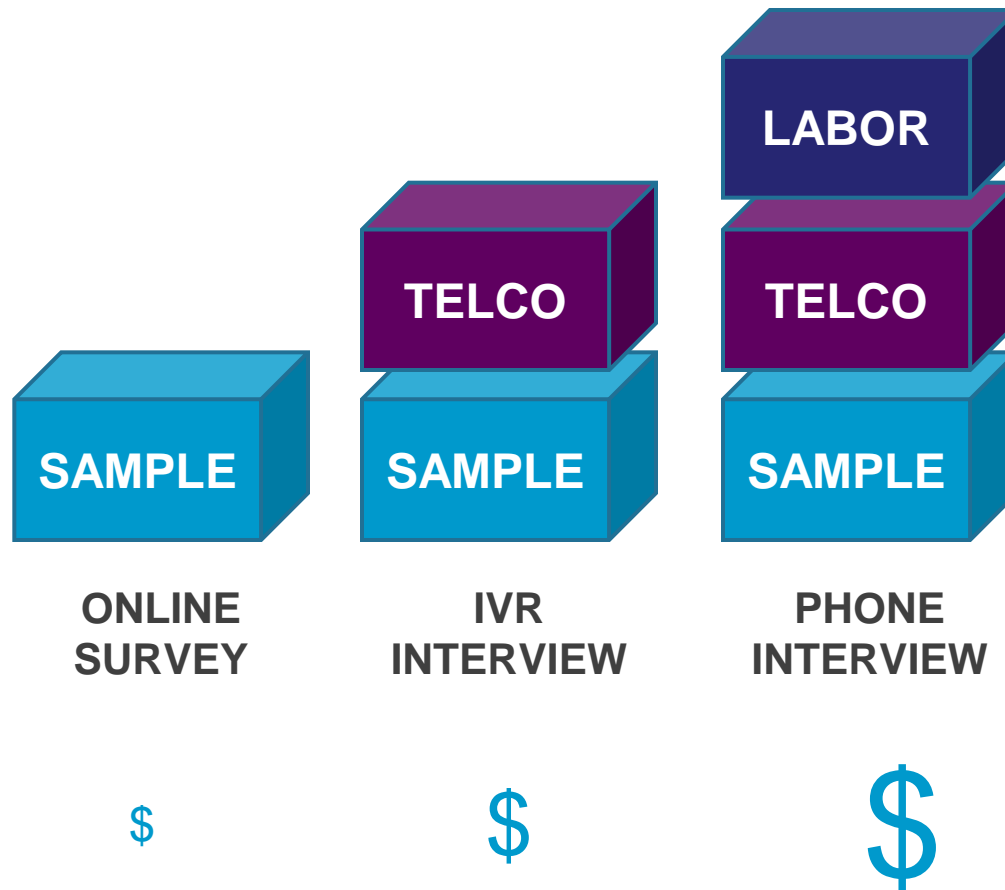
Provides the flexibility to mix IVR and live interviewing

Delivers accurate early insights

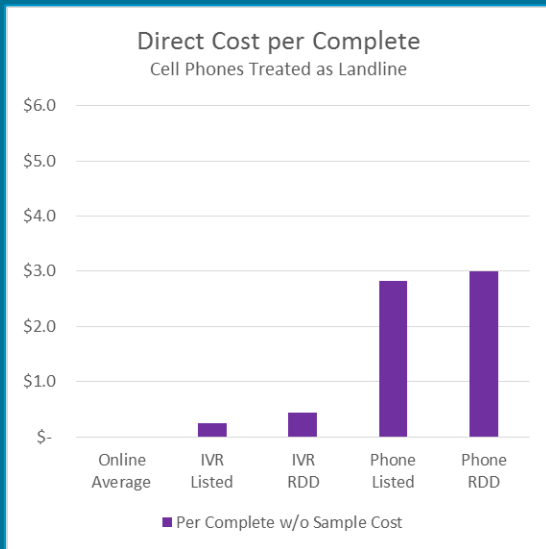
Offers a low-cost option for time-critical, brief surveys



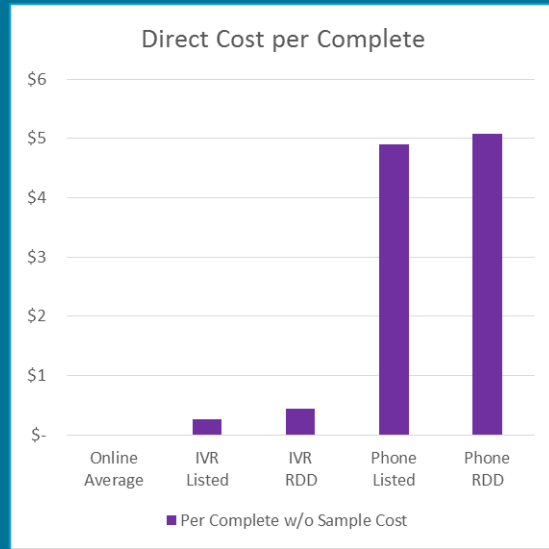
# Multi-Mode Cost Components



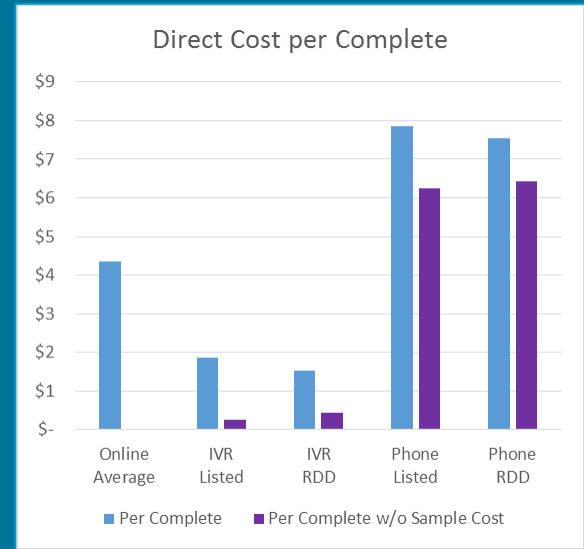
# Direct Costs Per Complete



**TELCO + LABOR**  
**Permissioned Lists**



**TELCO + LABOR**  
**Non-Permissioned Lists**



**SAMPLE + TELCO + LABOR**  
**Non-Permissioned Lists**

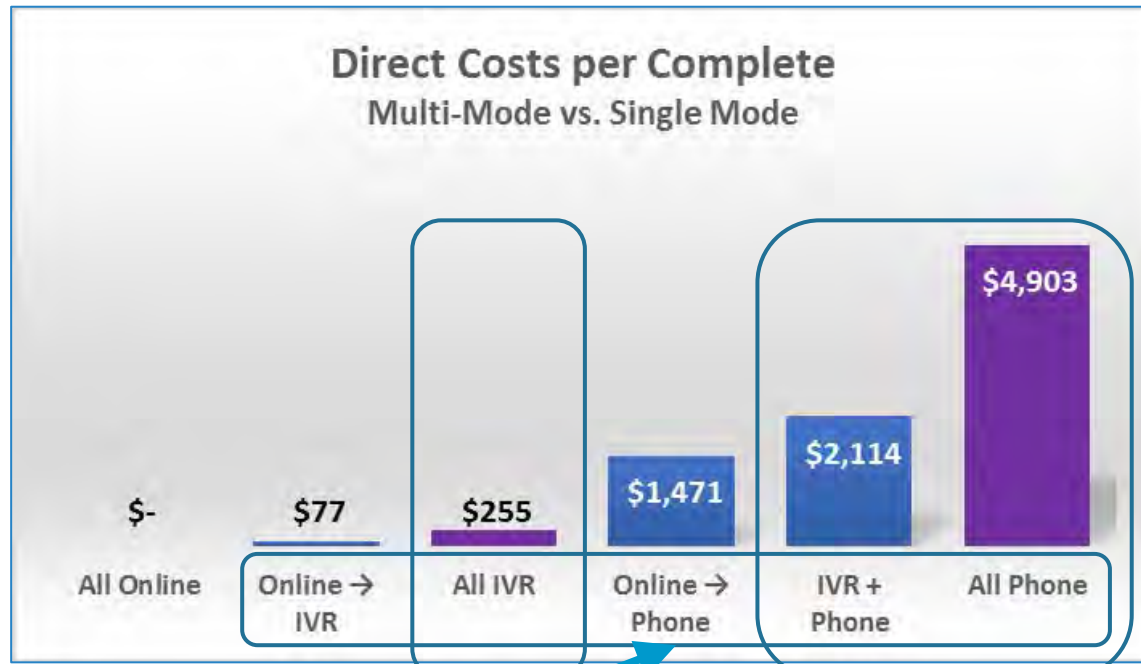
Direct Cost per Complete	Online Average	IVR Listed	IVR RDD	Phone Listed	Phone RDD
<b>Sample</b>	<b>4.35</b>	<b>1.6</b>	<b>1.1</b>	<b>1.6</b>	<b>1.1</b>
Unit Cost	0.29	0.08	0.02	0.08	0.02
Contacts per Complete	15	20	55	20	55
<b>Telco</b>	<b>0</b>	<b>0.26</b>	<b>0.44</b>	<b>0.26</b>	<b>0.44</b>
Cost per Minute	0.0157	0.0157	0.0157	0.0157	0.0157
Minutes per Non-connected Dial	0.33	0.33	0.33	0.33	0.33
Dials Not Interviewed per Complete	19	54	19	54	19
Minutes per Interview	10	10	10	10	10
Unit Cost per Interview	0.157	0.157	0.157	0.157	0.157
<b>Labor</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.65</b>	<b>4.65</b>
Direct Interview Labor				3.87	3.87
Overhead Labor				0.77	0.77

Direct Cost per Complete	Online Average	IVR Listed	IVR RDD	Phone Listed	Phone RDD
Per Complete	\$ 4.35	\$ 1.86	\$ 1.54	\$ 6.50	\$ 6.18
Per Complete w/o Sample Cost	\$ -	\$ 0.26	\$ 0.44	\$ 4.90	\$ 5.08

PHONE: 40:60 cell to landlines, differentially dialed.  
 ONLINE: 50:50 optimized connect vs. non-optimized.

SOURCES: MSG, Fulcrum, and Survox customers

# How Costs Might Shift



DEMOGRAPHICS & QUOTA MATTER

TIME IS SHORT

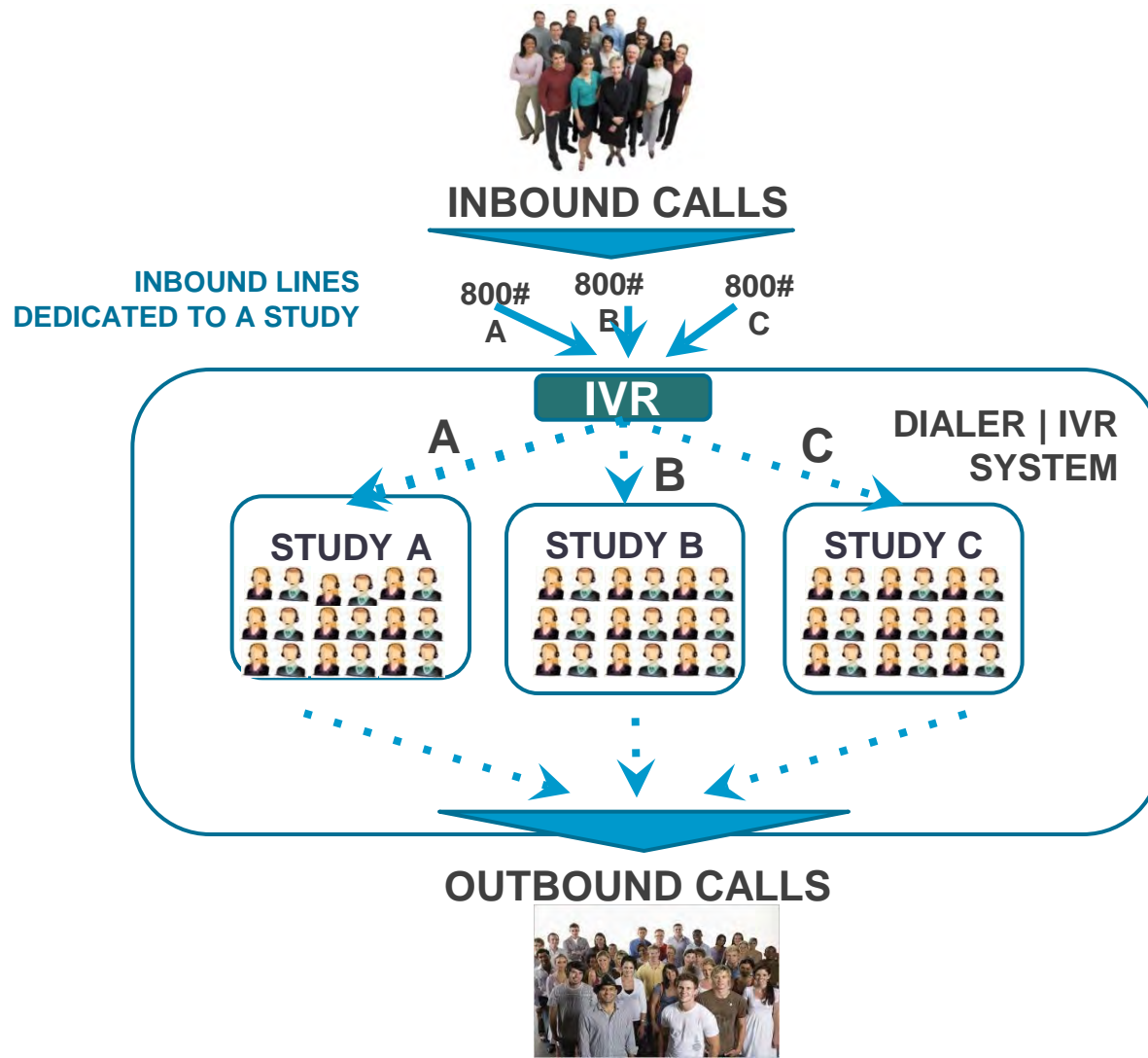
	DIRECT COST	ONLINE	ON-IVR	ON-PHONE
All Online	\$ -	100%	0%	0%
Online → IVR	\$ 77	70%	30%	0%
All IVR	\$ 255	0%	100%	0%
Online → Phone	\$ 1,471	70%	0%	30%
IVR + Phone	\$ 2,114	0%	60%	40%
All Phone	\$ 4,903	0%	0%	100%

1000 Responses; IVR – landlines & permissioned cell phones

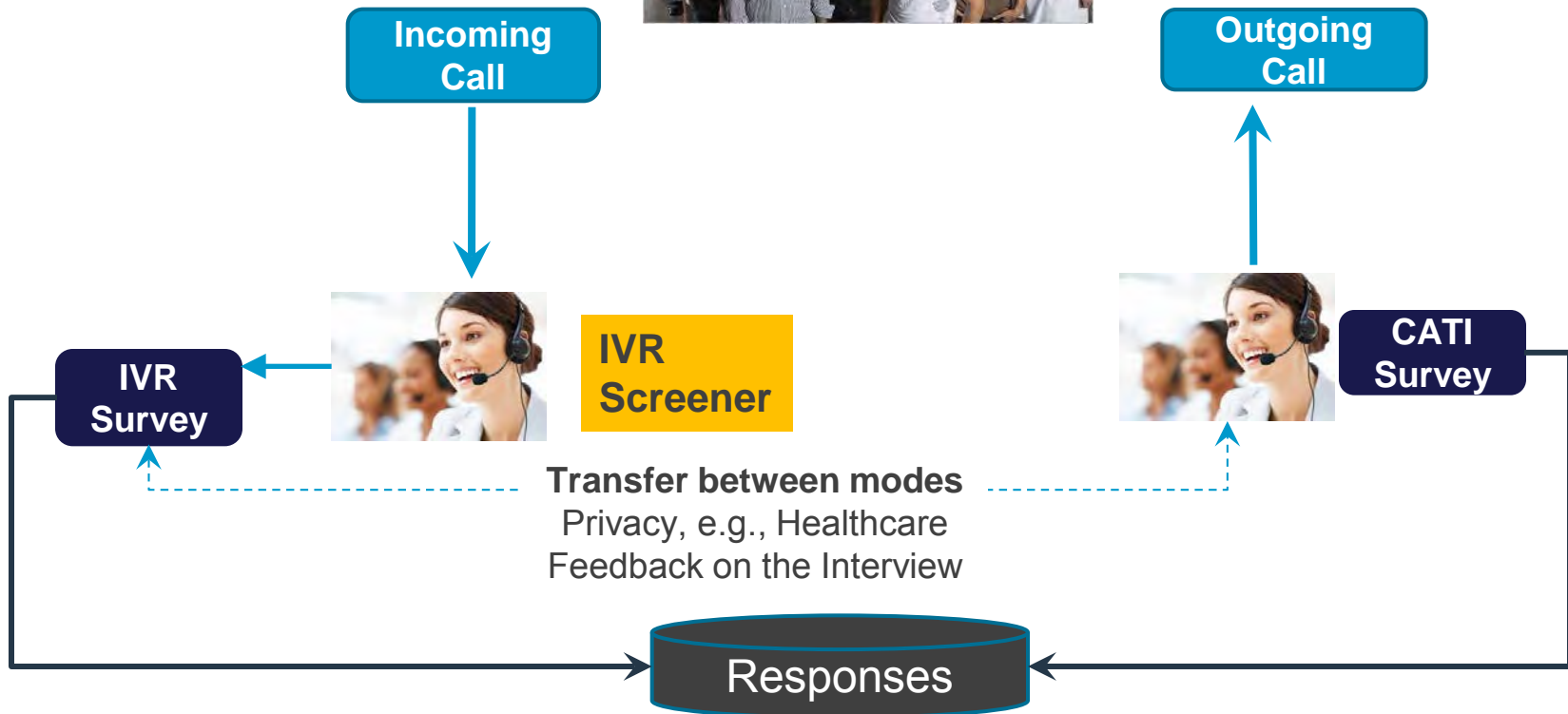
A network diagram background consisting of a complex web of thin blue lines connecting various nodes. The nodes are represented by small circles and squares of varying sizes and colors (white, light blue, dark blue). The connections are dense and crisscrossing, creating a sense of interconnectedness. The background is a solid light blue color.

# Call Blending

# Call Blending Workflow Automation



# Phone-Based Data Collection Process



# Benefits of Call Blending & IVR

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## Call Blending & IVR combine

### Outbound Calling with Inbound Returned Calls



- ❑ Accelerate callback conversions and quota completes
- ❑ Increase staff productivity
- ❑ Increase response rates with choice of survey input modes
- ❑ Proactively respond to the surge in callbacks from cell phones
- ❑ Reduce the need to “weight” results or “wait” for connections by managing returned calls from cell phones more efficiently
- ❑ Control costs – leading to better margins and more opportunities for growth

# Study-Specific Benefits of Call Blending & IVR

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- ***Purchase less sample*** to meet your quota.
- ***Increase caller retention*** and conversion to shorten study duration.
- ***Improve productivity***, reduce costs per complete, and have more pricing flexibility when bidding new jobs.
- ***Respondent satisfaction***, allows the respondents to talk to you on their terms.



# Call Center Staffing Benefits

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- **Eliminate dedicated interviewers for inbound calls**
  - Existing staff dedicated to outbound calls can be fed inbound calls as the next interviewer becomes available.
- **Raise interviewer productivity**
  - Let IVR offload initial screening and other tasks
  - Focus interviewers on high-value activity
  - Reduce the overall time spent per call.

# Interviewer Productivity Metrics

- ❑ Improve interviewer productivity
  - ❑ Example based on 100 stations (\$117,000 productivity savings per year)
- ❑ Assumptions:
  - ❑ **Before:** Average interviewer gets 24 completes per 6-hour shift (6 days a week for 52 weeks, at \$15 hr) = 1,872 hours a year at \$28,080 and \$3.75 per complete (a total of 7,488 completes)
  - ❑ **After:** With call blending & IVR gets 1 extra complete per shift (312 extra completes per year, for a total of 7,800 completes)
  - ❑ **Productivity improvements:** 312 extra completes x 3.75 = \$1,170 per interviewer per year
  - ❑ **100 interviewers:** 31,200 extra completes x \$3.75 = **\$117,000 savings per year**

The background of the slide features a network diagram with various nodes and connecting lines. The top and bottom sections are light blue, while the middle section is black. The nodes are represented by circles and squares of different sizes, connected by thin lines. The overall theme is technology and connectivity.

# IVR Services

# The Power of Survox IVR as a Service

- Professional Services team with years of Survent programming experience
- Integrate with Third-Party sample feeds
- Integrate with Third-Party data repository
- Flex your staff
- Flex your skills
- IVR for ad hoc (cost of ownership)
- Survox native; no dialer required
- Professional voice over
- Fully outsourced solution. Just leave the driving to us!



# Planning

Num	Task	Owner	Resources	Typical Est. Time	Notes
IVR PROJECT SERVICES					
1.00 Define Scope					
1.01	IVR Kick off with customer: Review project design, req'd resources	Customer Success	Customer	1-2 hrs	Understand use case, language requirements, voice production requirements
1.02	Survey Instrument Review, incl. quota management, if req'd	Customer Success	Customer	2 days	Final Survey Script and Project Parameters
1.03	Data handling, reporting and integration design	Customer Success	Customer	3 days	What data is transferred where and how often
2.00 Environment					
2.01	Execute environment build procedure and plan	Customer Success			Build, configure and test procedures
2.02	Receive Qualtrics API Token from Customer	Customer	Customer Success		
2.03	Procure telco channels / DID #s	Order Administration	Support	1-2 weeks	How many telco channels are required
2.04	Update dialer configuration	Support	Customer	1-2 days	Trunks, Max calls, parmfile dialer lines, etc
3.00 Development					
3.01	Voice talent acquisition	Customer Success	Customer	1 week	
3.02	Survey programming	Customer Success	Customer	2 weeks	
3.03	Survey Logic test	Customer Success	Customer	2 days	
3.04	Translations	Customer Success	Customer	5 days	
3.05	Voice file creation and implementation	Customer Success	Customer	1 week	
3.06	Qualtrics Survey Preparation	Customer Success	Customer	2 days	
3.07	Customer Data FTP Transfer Automation, Configuration and Testing	Customer Success	Customer	2 weeks	
4.00 Testing					
4.01	Review Qualtrics integration with customer	Customer Success	Customer	2-3 days	Piping IVR survey data and Customer data into Qualtrics survey
4.02	Qualtrics survey IVR data transmission testing	Customer Success	Customer	3 days	
4.03	Verify data automation	Customer Success	Customer	2 days	
4.04	Verify all data	Customer Success	Customer	2 days	
4.05	Testing and sign off by customer	Customer Success	Customer	1-2 days	
5.00 Production					
5.01	Launch production	Customer Success		1 day	
5.02	Documentation	Customer Success		1 week	

# The Power of Survox IVR Services

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- Custom dialing and disposition rules
- Outbound, Inbound and Transfer modes available
- Multiple mode interviewing - include web and phone
- Multiple languages
- Complex quotas and survey branching
- Automated data feeds to your repositories

# Q & A



# Next Steps

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- Share this information with your team, call center operations, & sales
- Think about
  - How can you expand your business opportunities?
  - Enhance respondent engagement
  - Maximize response rates
- Learn more at
  - [docs.Survoxinc.com](https://docs.survoxinc.com)
  - [www.Survoxinc.com/resources](https://www.survoxinc.com/resources)
- Visit [Survox Services Center](#)
  - Contact Professional Services for custom integrations
  - Request training