

AVOKE

Caller Experience Analytics

Using Analytics In the Development Lifecycle to Increase Success and Accelerate Launch Of Call Center Speech Applications

Joe Alwan

VP/GM AVOKE Caller Experience Analytics

Raytheon BBN Technologies

Raytheon
BBN Technologies

The Hidden Cost of Technology Failure in the Contact Centre

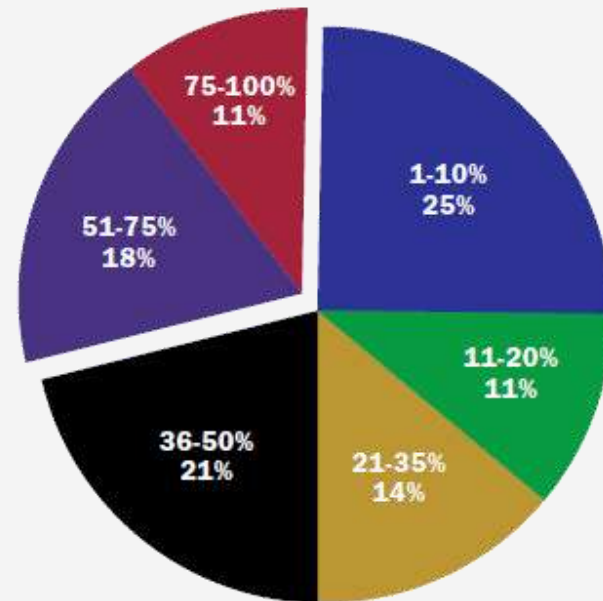
- Between 25% and 33% of technology projects – such as new IVR or CTI systems – get delayed.
- Top causes: stakeholder issues, poor planning, lack of senior management focus, lack of resources and supplier issues.
- Well over half said that technology projects often (48%), nearly always (6%) or always (3%) go wrong.
- Delays add an average of 7 months of time and an extra 90% to the original cost budget.

100 companies
Sept 2009



The Hidden Cost of Technology Failure in the Contact Centre

Nearly one-third of companies cited service failure rates of over 50 per cent as a result of project delays



Percent of customers negatively affected by project delays

100 companies
Sept 2009



“Opening The Kimono” – Why Speech Fails

“...multiple stakeholder groups who could propose changes at will... the resulting user experiences had become so convoluted they were unusable...”

“...not measuring outcomes at all, having metrics but not analyzing (them), or not identifying appropriate actionable outcomes...”

“...usability testing wasn’t done, or it wasn’t done well, which made production usage a giant (and unwelcome) surprise...”

“...changes were proposed for unverified problems, introducing more serious usability problems than what originally existed...”

Melanie Polkosky, Ph.D., is a social cognitive psychologist and speech language pathologist who has researched and designed user experiences for more than 12 years.

Jan 2010



“Opening The Kimono” – Why Speech Fails

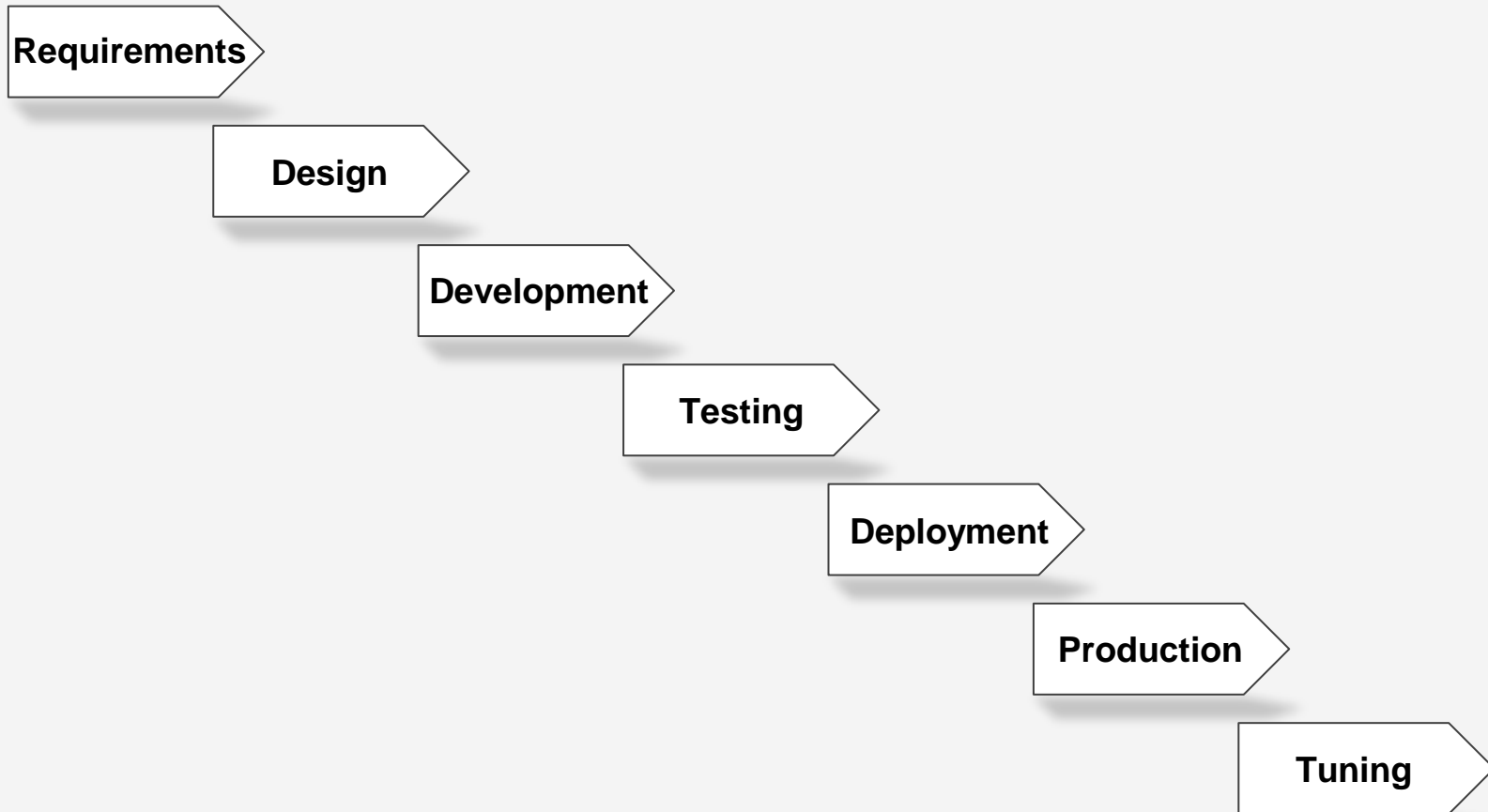
1. Decentralized control of the IVR
2. Lack of knowledge diversity
3. Limited outcome metrics
4. Lack of trust
5. Lack of predeployment usability testing
6. Spaghetti-like business logic
7. Lack of change management
8. Ripple-effect refusal

Melanie Polkosky, Ph.D., is a social cognitive psychologist and speech language pathologist who has researched and designed user experiences for more than 12 years.

Jan 2010



Where Analytics Adds Value



Where Analytics Adds Value

Requirements

Design

Dev

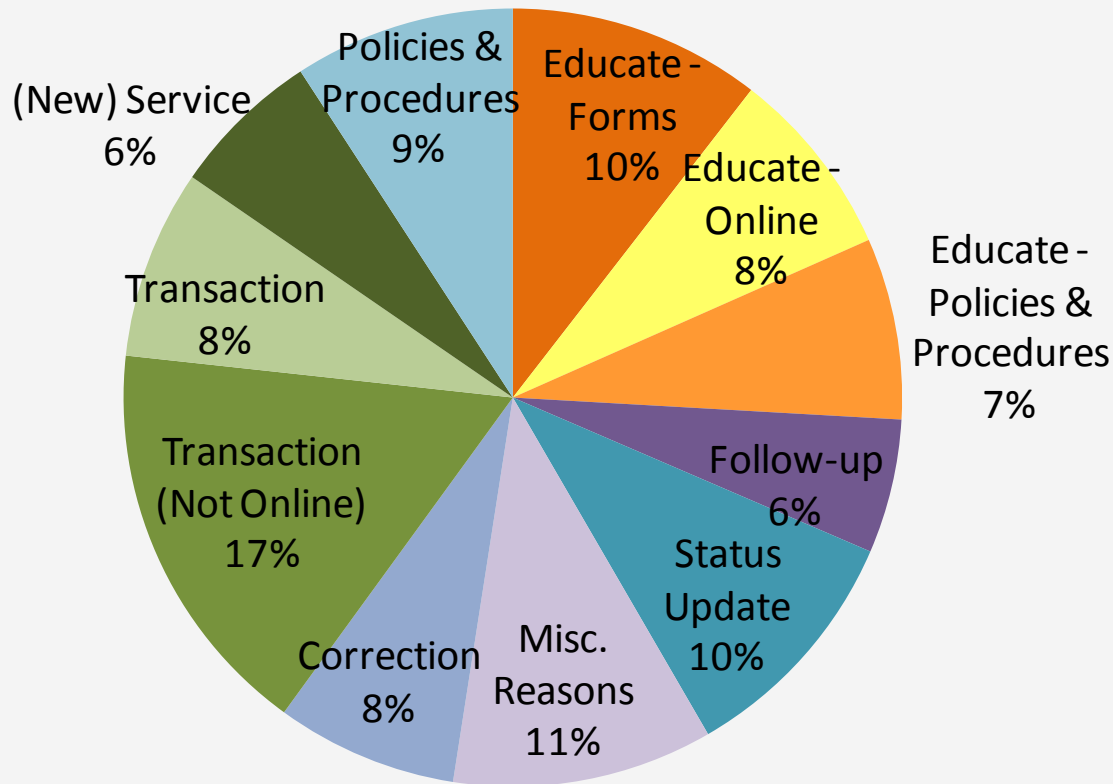
Early in the lifecycle, analytics can be used to define requirements anchored by real user behavior.

Analytics provides an authentic understanding of the ultimate users of the speech application by profiling how they currently interact with agents and existing IVR applications.

Tuning

Using Analytics To Define Requirements

Reasons For Call



Using Analytics To Define Requirements

Self-Service Potential

Reason for Call	Total	Handled by Agents			
		Self-served*	Missed SS	Potential SS	Need Agent
Appointments	3%		2%		1%
Billing	44%	2%	7.5%	2.5%	33%
Cancel	3%				3%
Change	19%			2.5%	17%
Feature/Product	7%	0.1%			7%
Sales	2%			0.5%	2%
Tech	18%	0.4%			18%
Other	6%				6%
	100%	2%	9.5%	5.5%	83%

Current self-serve rate

Callers not using existing apps

Needs new apps

Will never self-serve

Using Analytics To Define Requirements

Root Cause of Transfers

Reason for Transfer	% Calls	Remedy
IVR Misroute	2.5%	Prompt more callers for Family
	1.5%	Proactively route past-due callers to the accounts receivable
	1%	Disambiguate generic Main Menu responses
	3.5%	Misc. Issues and Remedies
Agent Process	6%	Expected Transfer
IVR No Play	4%	Expected Transfer
IVR Reco Problems & Error Outs	3.5%	Adjust Rejection Sensitivity/DTMF fallback
Loyalty Escalation	2%	Only send cancellations to loyalty
Upset Escalation	1.5%	Expected Transfer
Review w/ Bell	1.5%	TBD
Other	4%	Misc. Issues and Remedies
	<hr/> 31%	

Reco problems & dialog design issues cause 12% of callers to be transferred unnecessarily!

Where Analytics Adds Value

Requirements

During pilot and launch, analytics can provide near real-time visibility of users interacting with the new app – and the app's response.

This greatly accelerates debugging and diagnosis. And it reveals specific failure modes, enabling precisely targeted fixes.

ng

Deployment

Production

Tuning

Real-Time Drill-Down To Caller-IVR Interactions

AVOKE
Call Browser
jalwanuser: [logout](#) [settings](#)

Dashboard
Analysis
Listening
Bookmarks
Tools

> Summary View <
[Annotation](#)
[Full Text](#)

2009-07-29 10:37 EDT

CallID: 2009-07-29-10-37-35_6174973800_20327216283012000205534@10.1.10.10

[Download Audio](#)
[Copy & Paste Link](#)

■ IVR ■ Queue ■ Agent

Start Time 2009-07-29 10:37 EDT

Duration 8:10.160

Calling Party Number 7742630538

Dialed Number Cust Svc 800-592-2000 (FreeSWITCH)

IVR Routing Payment

Completion Agent(s)

Transfers 3

Termination Caller

Authentication in IVR Entering Account

Annotated Call Reason N/A

Exit Point ID Capture

Retries 1 Error Prompt

Where Call Ended in IVR

Call Connection Connected

Self-Service No Self-Serve

Agent Routing Credit

Outage Exit Point N/A

Event	Start
◆ [110-5020] How may I help?	0:12.467
◆ [180-5360] Pay by phone?	0:19.829
◆ [230-5630] Lookup accounts	0:26.606
◆ [230-5640] Account number?	0:29.536
◆ [230-5670] invalid acct #	0:40.923
# pressed 0	0:47.081
◆ [210-5530] Transfer	1:00.761
◆ [Q-01] Ring	1:03.920
◆ [Q-01] Ring	1:09.095
◆ [Q-01] Ring	1:14.345
◆ [Q-01] Ring	1:17.345
◆ [Q-01] Ring	2:04.317
◆ [Q-04] ...may be monitored.....	2:44.840
◆ [Credit] disconnect or other...	2:50.041
# pressed 2	2:59.223
● Caller	8:10.253

Event Details

Start: 0:26.606

Duration: 0:00.811

Type: Prompt

Name: [230-5630] Lookup accounts

Description: Please hold while I lookup your accounts.

Click here to add your comments about this call

[SUBMIT COMMENT](#)

Where Analytics Adds Value

Requirements

In production, analytics can provide key metric reporting and monitoring, caller-path analysis, and drill-down to actual caller interactions.

This data enables precision application level tuning – targeted specifically on the highest impact opportunities to improve performance.

ent

Production

Tuning

Caller Path Analysis

AVOKE Call Browser
jalwanuser: [logout](#) [settings](#)

Dashboard
Analysis
Listening
Bookmarks
Tools

All Calls ▾
[Bookmark this analysis](#)
Process Calls ▾
[Copy & Paste Link](#)

542 calls selected

Select filters:

- IVR Routing
- Call Completion
- Hour of day
- Day of Week
- Week
- Month
- Date
- Duration
- Transfers
- Time in IVR
- Queue/Hold Time
- Agent Time
- Termination
- Dialed Number
- Where Call Ended
- Self-Service
- IVR Authentication
- Opt Outs
- Annotated Reason
- Full Text Search

IVR
 Queue
 Agent

Pie Chart
 Timing Chart
 Column Chart
 Call Path

[Select Events](#)
[Chart Settings](#)
[Print](#)
[Full Screen](#)

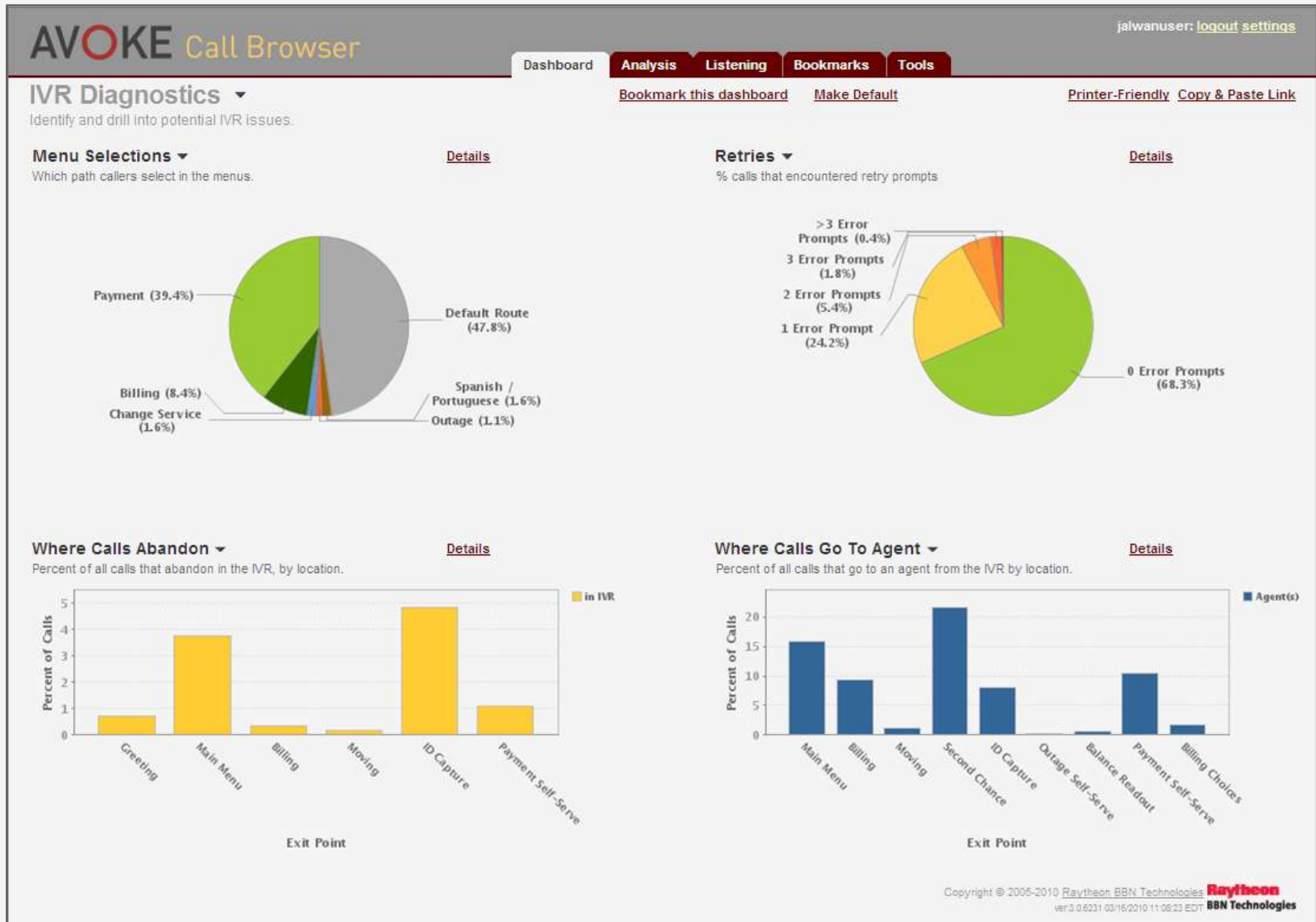
```

            graph TD
                ResidentialMenu -- 27 --> Estimated1[Estimated/WaitTime]
                ResidentialMenu -- 6 --> MonitoringMessage
                ResidentialMenu -- 97 --> CallbackOffered
                ResidentialMenu -- 17 --> Estimated2[Estimated/WaitTime]
                ResidentialMenu -- 12 --> Caller1[Caller]
                ResidentialMenu -- 36 --> Caller2[Caller]
                MonitoringMessage -- 69 --> Caller3[Caller]
                MonitoringMessage -- 9 --> Destination
                MonitoringMessage -- 7 --> BillMatrixGreeting[BillMatrix-Greeting]
                CallbackOffered -- 8 --> Estimated3[Estimated/WaitTime]
                Estimated3 -- 154 --> Caller4[Caller]
                Estimated2 -- 8 --> Caller5[Caller]
                
```

Details on 1 to 25 of 542 Calls Export ▾ Page 1 2 3 4 5 ➔

Time	Duration	IVR Routing	ID	Completion
2007-06-12 23:41:51.0	00:04:06	Residential	473932	Abandon in Queue
2007-06-12 20:36:32.0	00:09:31	Billing	473816	Agent(s)
2007-06-12 20:16:06.0	00:07:07	Billing	473806	Agent(s)
2007-06-12 20:02:13.0	00:11:46	Arrangements	473769	Agent(s)
2007-06-12 19:29:00.0	00:11:33	Arrangements	473740	Agent(s)
2007-06-12 19:25:57.0	00:15:29	Billing	473751	Agent(s)
2007-06-12 19:15:16.0	00:08:24	Billing	473699	Agent(s)
2007-06-12 19:13:15.0	00:10:14	Billing	473689	Agent(s)
2007-06-12 18:59:46.0	00:13:49	Billing	473641	Agent(s)
2007-06-12 18:28:48.0	00:07:05	Arrangements	473590	Agent(s)
2007-06-12 18:22:40.0	00:09:46	Start/Stop/Move	473570	Agent(s)
2007-06-12 18:21:18.0	00:10:27	Billing	473560	Agent(s)
2007-06-12 18:12:18.0	00:04:53	Billing	473544	Agent(s)
2007-06-12 17:59:59.0	00:34:10	Billing	473580	Agent(s)
2007-06-12 17:49:16.0	00:04:52	Billing	473465	Agent(s)
2007-06-12 17:32:14.0	00:05:27	Arrangements	473376	Agent(s)

Key Metric Reporting



Key Metric Trending



Using Analytics In The Development Lifecycle

- Establish requirements anchored by real user needs and behavior – and therefore less susceptible to change during the project.
- Accelerate troubleshooting and debugging during the pilot and initial production stages.
- Better reporting in production.
- Data and insights to get more value from tuning.

AVOKE

Caller Experience Analytics

web: www.bbn.com/avoke
email: avoke@bbn.com
phone: 617-873-1600