

Operations & Serviceability



User & Device Provisioning Services



Voice Quality Monitoring & Alerting



Operations & Fault Monitoring



Network & Application Probing

Applications & Services



Voice Messaging



Rich Media Conferencing



Presence Services



Mobility



Contact Center



Collaboration Clients

Call Control



IP PBX



MTP & Xcode



IP Phone



IP Phone



Network



Mobile

Call Center Solutions

Call Routing



Call Processing Agent



Dial Plan



Call Admission Control



Video Telephony



PSTN & IP Gateways



PSTN Services



Remote Site Survivability

Networking



Access Switch



Wireless



Distribution & Core Switching



WAN Aggregation Router



Security



Quality of Service



IP WAN & Internet Access



Branch Router & Access Switch

AVAYA

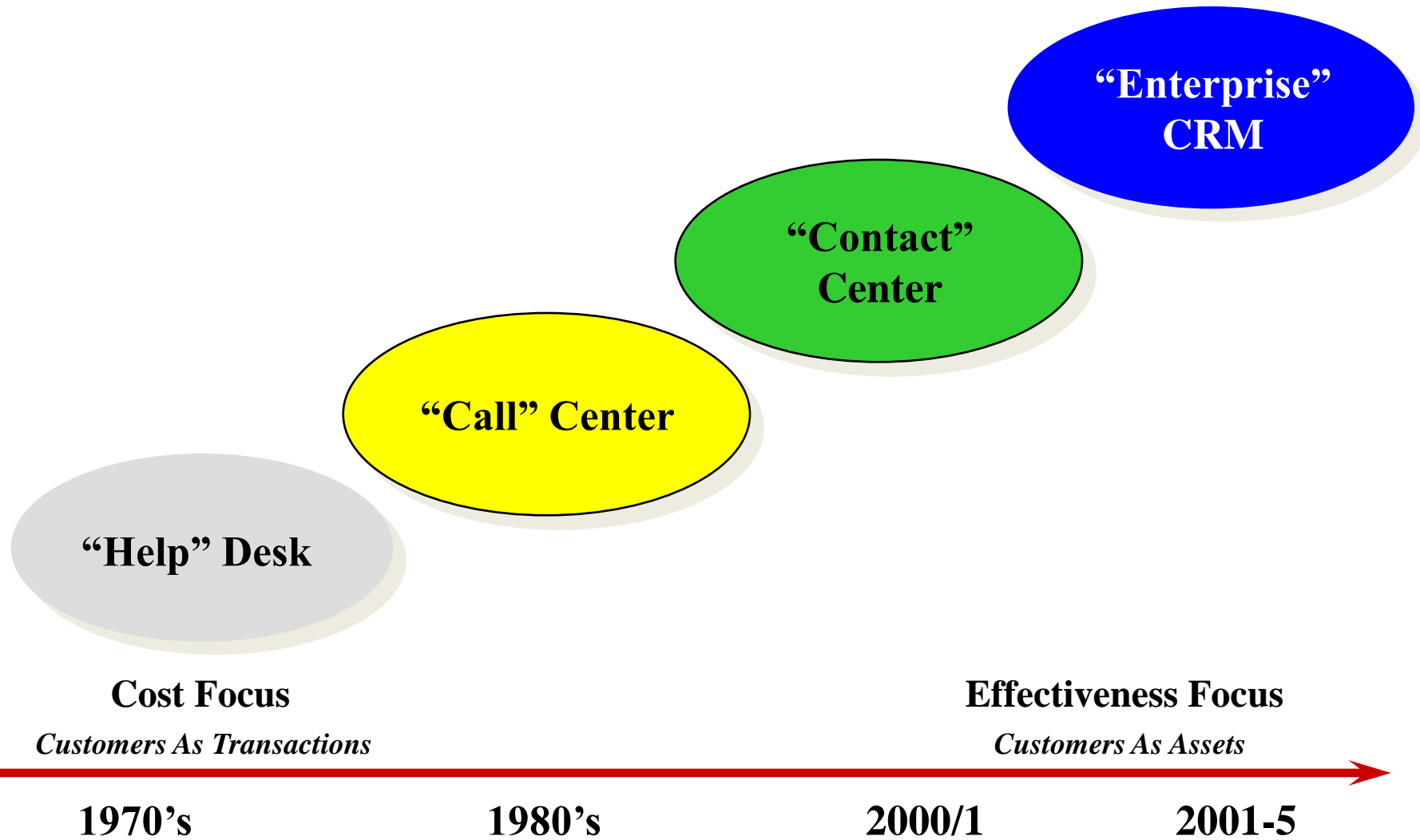
Call Centers Solutions

Welcome to Contact Center World

- You'll know how Contact Centers have Evolved
- You'll understand how State of the Art Contact Center passes through different stages
- You'll know different Call-Center offerings from Avaya
- You'll experience important features of call-centers and their business benefits



Contact Centers are viewed as a key piece of the evolution to enterprise CRM



Different Stages of Contact Center Architecture

- Stage 0 – Taking Calls
- Stage 1 – Basic Call Handling
- Stage 2 – Operational Reporting
- Stage 3 – Call Routing
- Stage 4 – Computer Telephony Integration
- Stage 5 – Customer Segmentation
- Stage 6 – Multi-site Operations
- Stage 7 – Multi-Channel
- Stage 8 – Analytics
- Advance Stage – CRM, IVR, Proactive Contact



Stage 0 – Taking Calls

Requirements

- Company needs to handle incoming calls
- Informally handles incoming customer calls
- Resources sharing time across business functions

Benefits

- Basic customer service provided

Solution Components

- Avaya Communication Manager

Resource



PBX



Customer

Stage 1 – Basic Call Handling

Requirements

- Company needs to handle incoming calls
- Formalizing basic call handling
- Dedicated resources to handle calls
- Agents answer calls as they come in
- Wrap-Up codes

Benefits

- Improve response to customers
- Better sales and service

Solution Components

- Avaya Call Center Basic Software (ACD)
- Avaya Callmaster
- Headsets

Agent



**PBX
ACD**



Customer

Stage 2 – Operational Reporting

Requirements

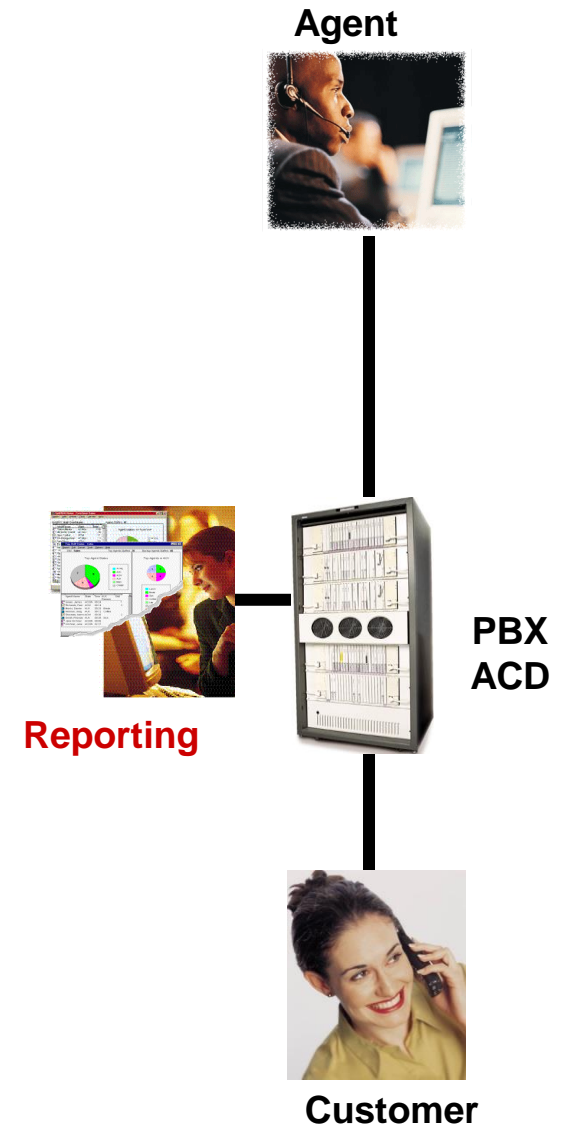
- Call centers need to bring control of costs and efficiencies
- Reports provide view into operational performance
- Supervisors and analysts can utilize basic call center data (call time, volume, etc.)

Benefits

- Improve response to customers
- Better sales and service
- Capacity planning
- Understand and effect agent resource utilization

Solution Components

- Avaya Call Management Systems



Stage 3 – Call Routing

Requirements

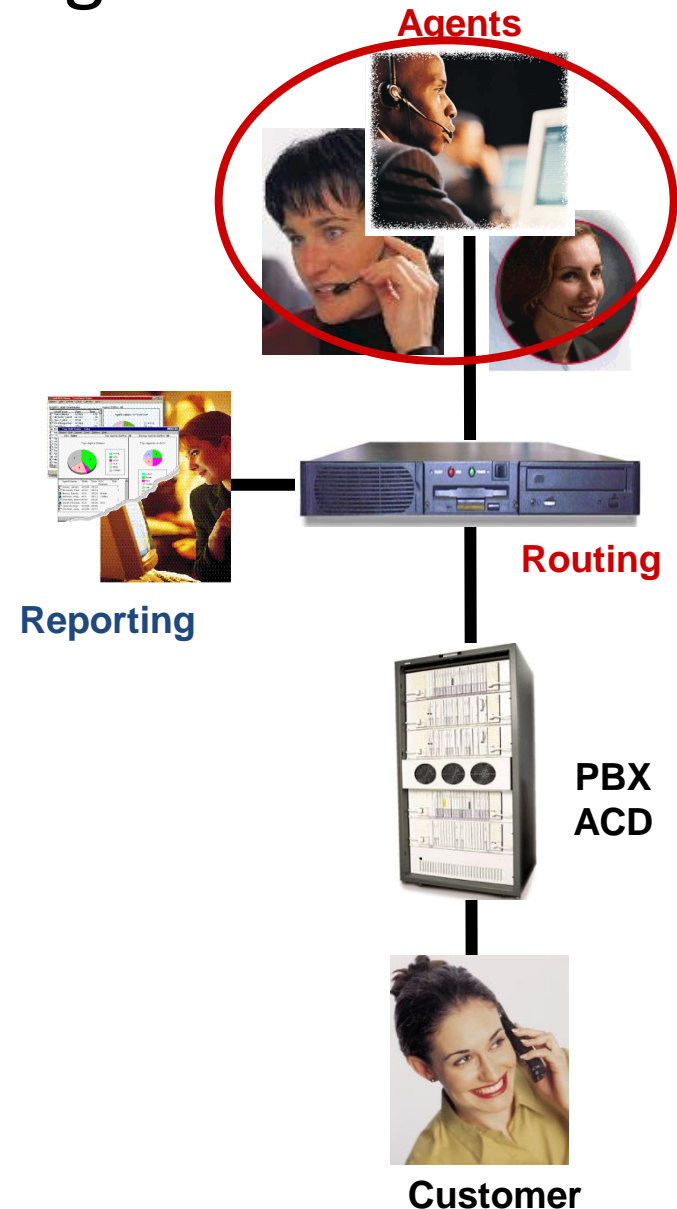
- As volume continues to increase, call centers need to increase agent performance
- Routing matches customer and call priority with agents
- Can better utilize agents (skilled based agents)
- Routing reports allow for more meaningful analysis (utilization, load balancing)

Benefits

- Improve 1st contact resolution
- Focused agent training
- Lower customer attrition

Solution Components

- Avaya Communication Manager
- Avaya Call Center Elite Software (ACD)
- Avaya Advocate (ACM based)



Stage 4 – Computer Telephony Integration

Requirements

- Present customer information upon delivery of call
- Identify and authenticate customers
- Preserve contact history
- Integrated desktop soft phone

Benefits

- Improve call handle times
- Increased consistency in contact handling
- Improve customer intimacy

Solution Components

- Avaya Interaction Center
 - **Voice Quick Start** or
 - **Voice Channel**
- Avaya Operational Analyst
- Avaya PSO for IC/OA deployment



Stage 5 – Customer Segmentation

Requirements

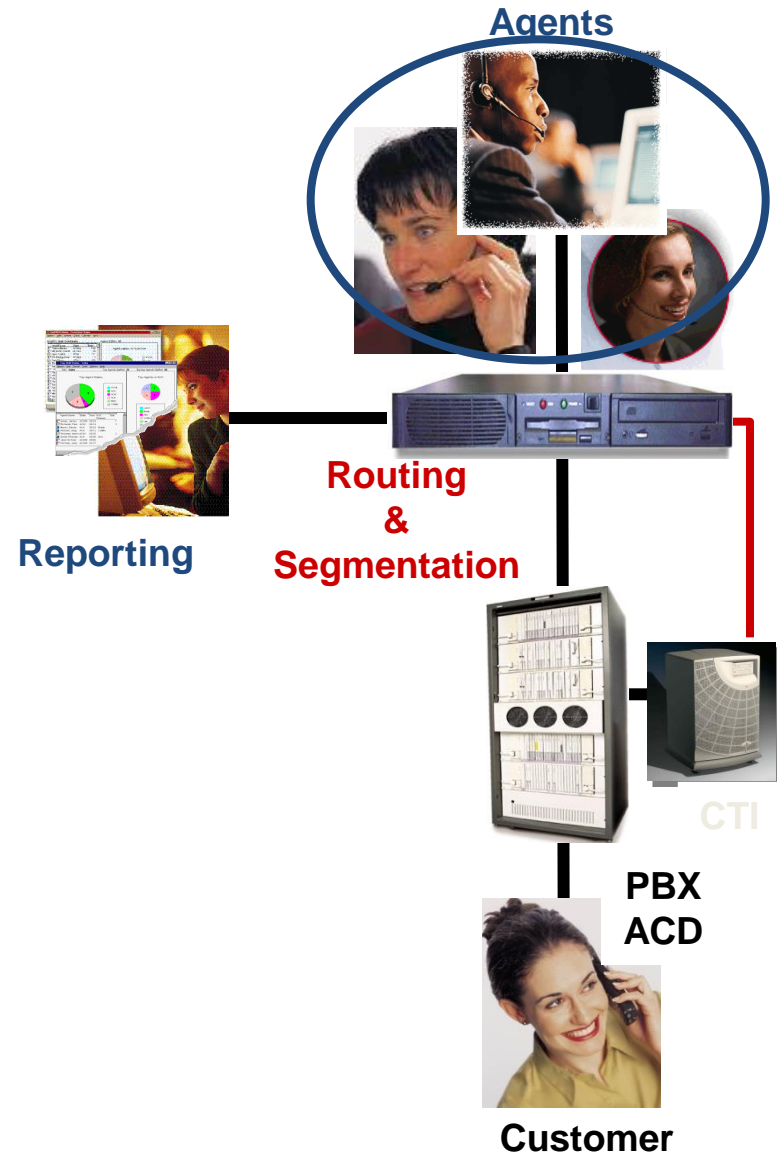
- Utilize customer data (not just call data) in routing algorithms
- Identify and authenticate customers

Benefits

- Provide appropriate service level to customer (gold, silver, bronze)
- Increased consistency in contact handling
- Improve customer intimacy
- Improved Agent/Customer “Match Rate”

Solution Components

- Avaya Interaction Center
- Avaya PSO for IC/OA deployment
- Avaya Business Advocate



Stage 6 – Multi-Site

Requirements

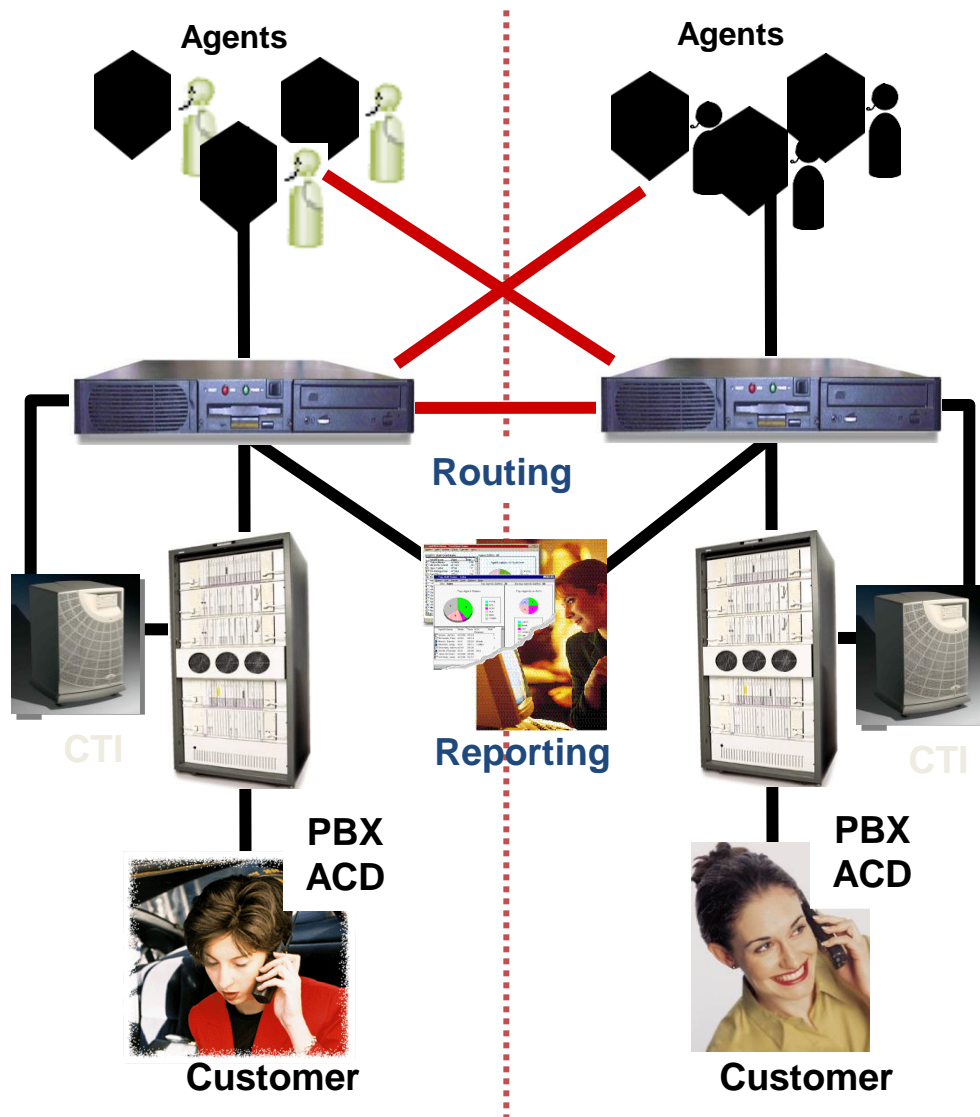
- Large enterprises look to link their centers in an effort to provide better and cheaper service
- Calls are routed to other centers or directly to agents working in remote locations

Benefits

- Allows for increased operations (follow the sun; expansion)
- Routing in the network (pre-route) makes for one virtual center
- Redundancy

Solution Components

- Avaya Network Routing
- Avaya Interaction Center
- Avaya Operational Analyst
- Avaya IP Agent



Stage 7 – Multi-Media

Requirements

- The Internet drives new communications channels
- Interaction management through a universal queue – a single routing engine – becomes the key component
- Newer companies (dot coms) may not even have a phone infrastructure
- System and reporting integration reduces required separate components

Benefits

- Improve contact handling time
- Increased consistency in contact handling
- Improve customer intimacy

Solution Components

- Avaya Interaction Center
 - **Email Channel** (w/ or w/o Content Analysis)
 - **Web Chat Channel**
- Avaya Operational Analyst /Avaya PSO for IC/OA



Stage 8 – Analytics

Requirements

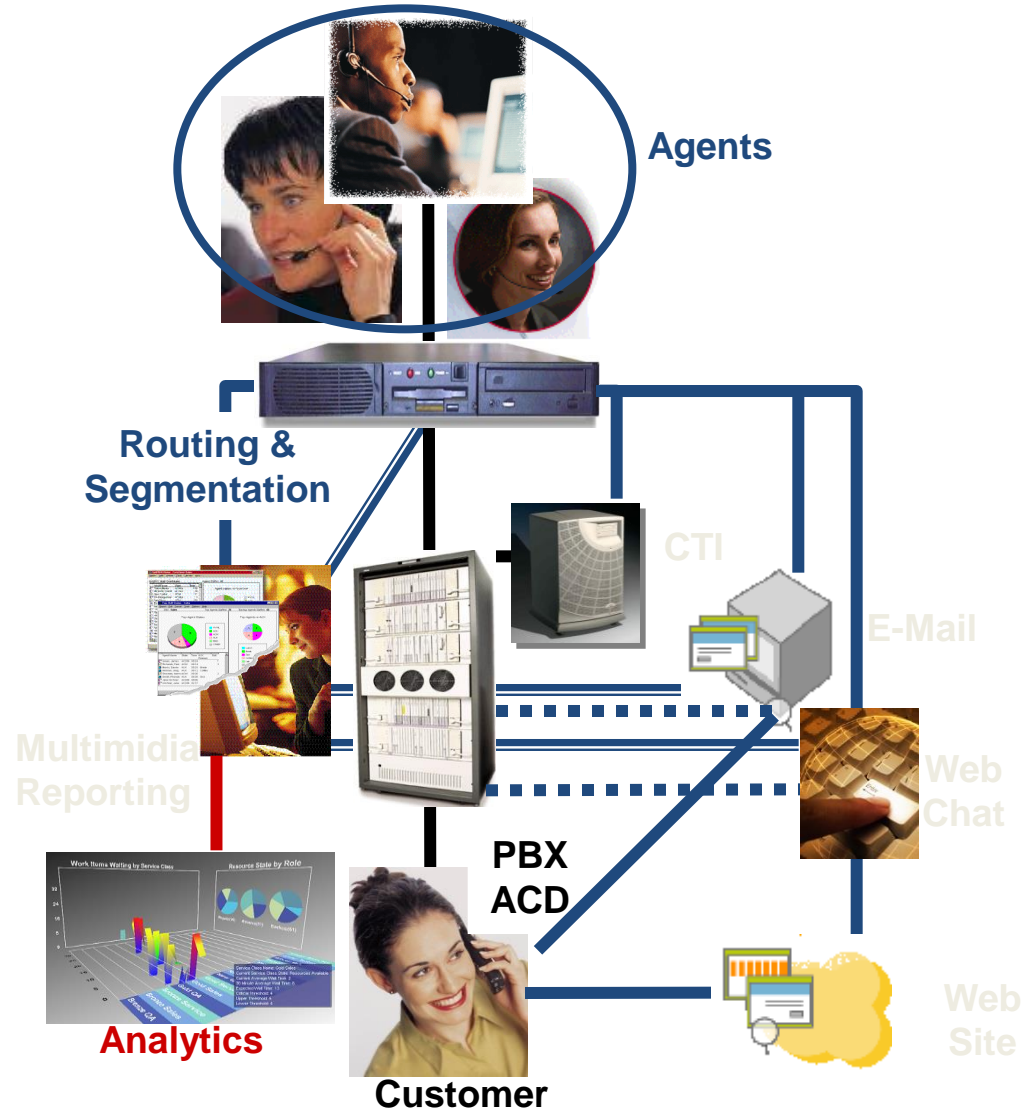
- Increasing contact center complexity drives increased demand for operational performance insight
- Contact center becomes more integral to the success of a business

Benefits

- Improve contact center operational efficiency and effectiveness
- Immediate adjustments with real-time analysis
- Strategic changes with historical analysis
- Improve overall business performance

Solution Components

- Avaya Operational Analyst



Stage 9 – CRM Applications

Requirements

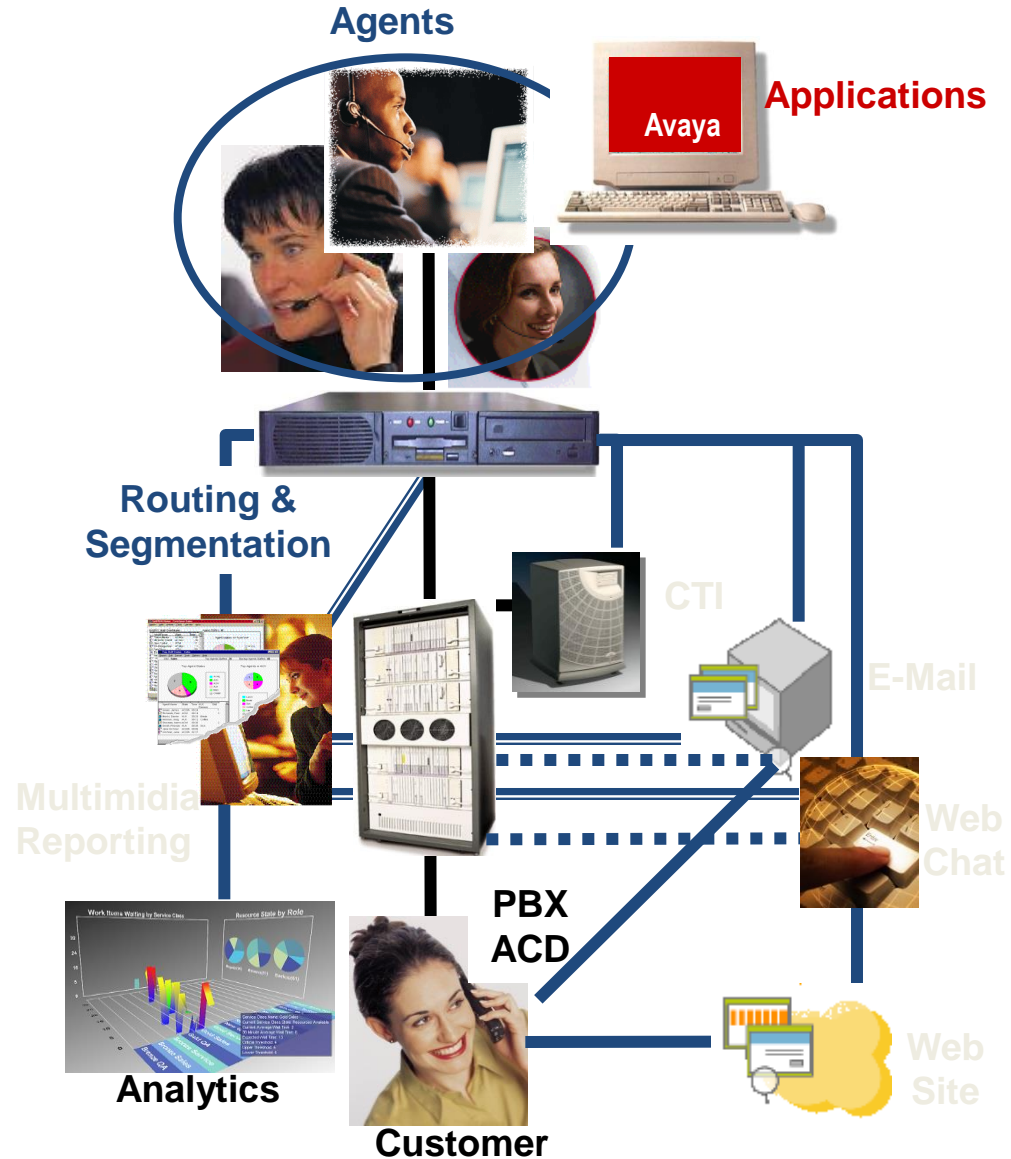
- Agents deal with sales and service issues

Benefits

- Improve contact center operational efficiency and effectiveness
- Improve overall business performance

Solution Components

- Avaya CRM Applications
 - HRQ
 - CCQ
 - CustomerQ
- 3rd party application integrations
 - Siebel
 - Peoplesoft
 - SAP
 - E.piphany



Advanced Stage – Interactive Voice Response

Requirements

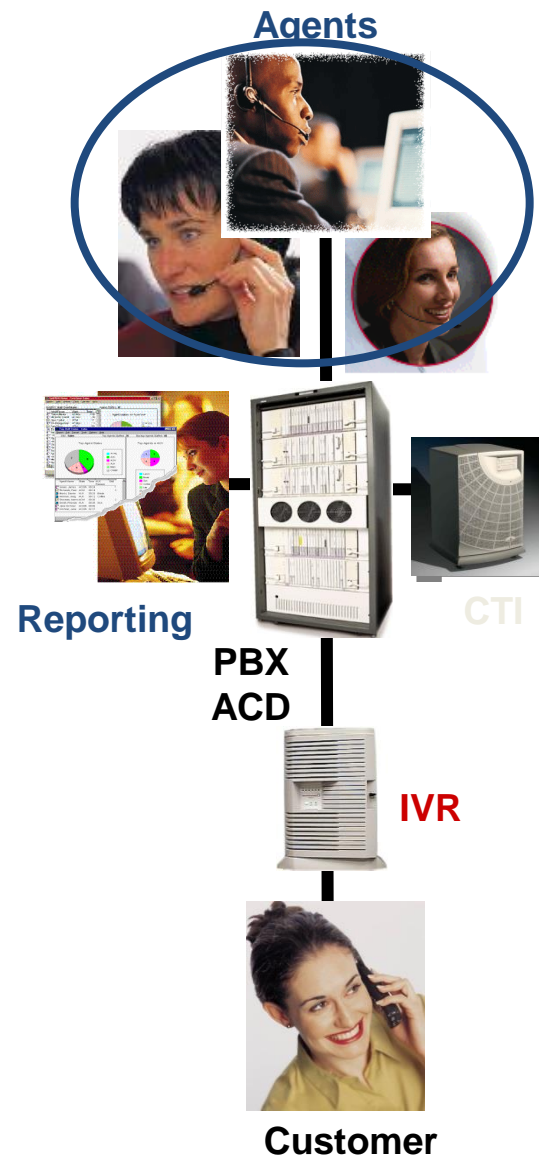
- Offload volume from agents

Benefits

- Customers receive faster service through self-service
- Additional data from IVR used to route calls better

Solution Components

- Avaya Interactive Response



Advanced Stage – Proactive Contact

Requirements

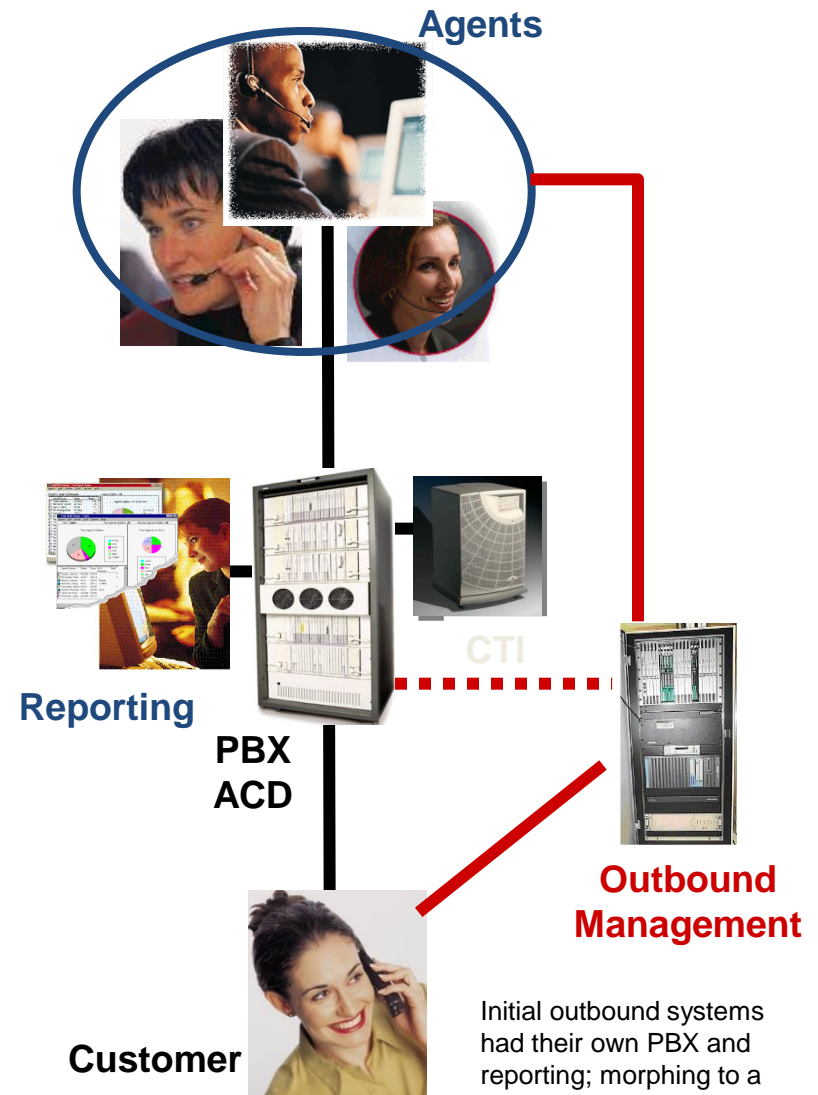
- Service changes from being reactive to proactive
- Agents can call customers
- Can be manual (preview) or automated (predictive)

Benefits

- Improve customer intimacy
- Increased business performance (eg. Collections)
- Increased consistency in contact handling

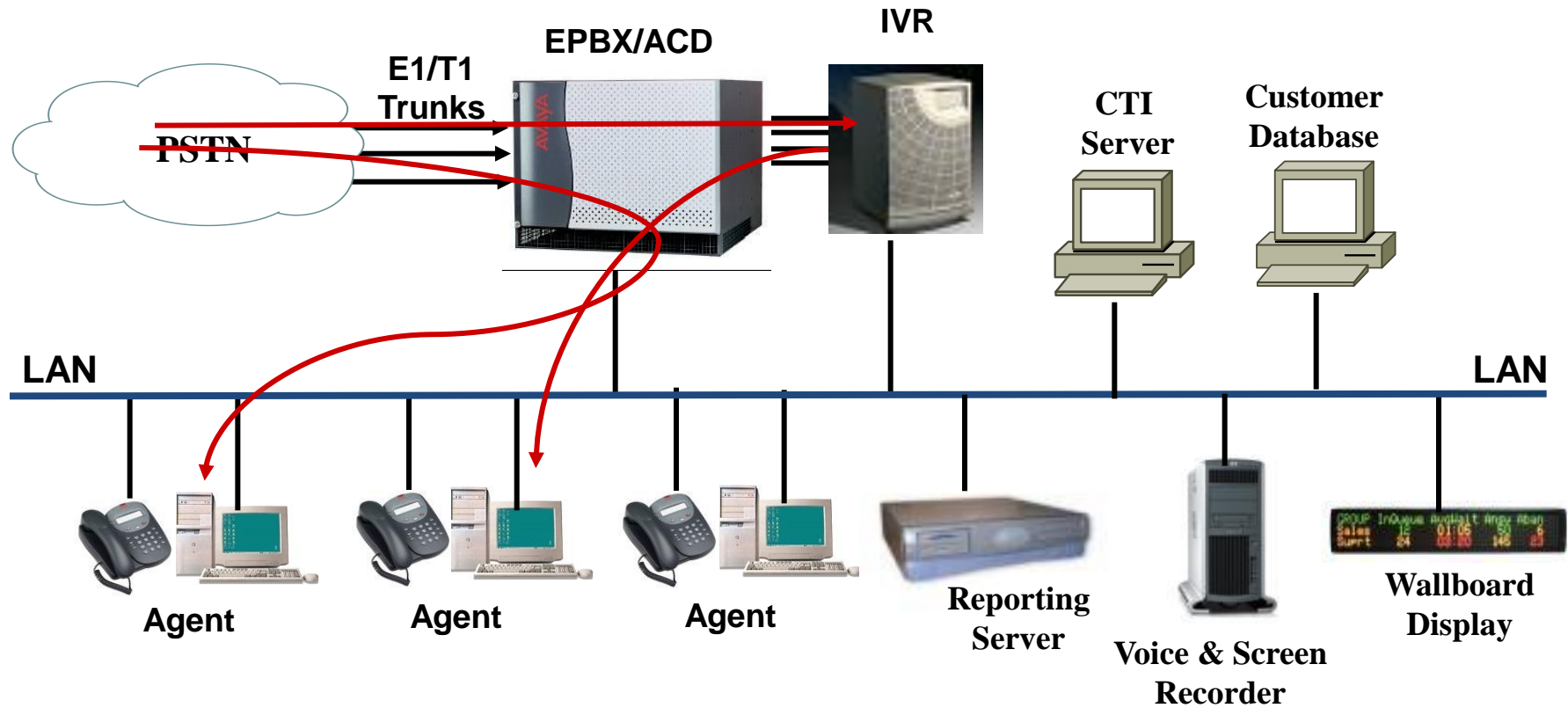
Solution Components

- Avaya Predictive Dialing System

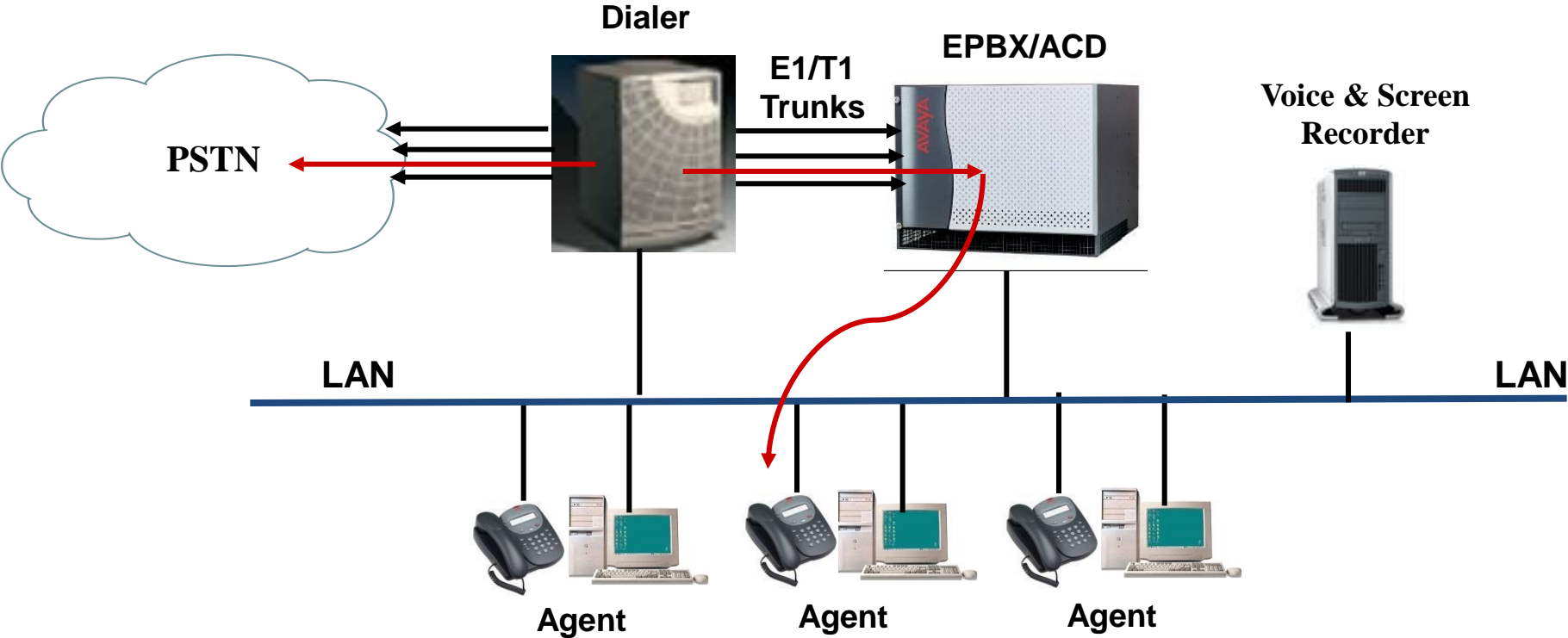


Initial outbound systems had their own PBX and reporting; morphing to a soft dialing system that utilizes existing systems.

Components of a Inbound Call Center



Components of a Outbound Call Center



Back to basics – Call Centre Packages

SL Obj.

PWT

Avaya Business Advocate

Dynamic Queue Position

EAS, LoA, Agent, EWT Routing BSR Vectoring
Call Center Support for locally placed music/announcement

Call Center Elite

Reason Codes for Aux & Logoff, Service Observe by Agent ID

SLM

Reserve Agents,

ISDN NCR

Vectoring, Advanced routing (ANI, CLID)

UCD

Call Center Introductory

Service Observing by VDN

Vectoring with Prompting

Basic ACD, RONA, Holiday Vectors, Service Observe by CoR, Timed ACW, BCMS,

Basic Call Center

Delay Announcements

Music in Queue MoH

VuStats

AAS

MIA

Terms quantifying Call Centre objectives

- Expected Wait Time (EWT)
 - **Time a caller can expected to wait in a queue. Must be lowered.**
- Average Speed of Answer (ASA)
 - **The current average time that it takes for a call to be answered in a split / skill or VDN. Must be lowered.**
- Percentage Answered in Service Level
 - **This feature is available only with Avaya Business Advocate app.**
 - **The call center supervisor sets targeted service level for answered calls. CMS provides information on the percentage of calls answered within a target service level.**
- Total ACD Time
 - **Time spent on ACD calls**
 - **Call time + Ringing time + Hold time**
 - **After Call Work time, i.e., time spent by agent in call-related activity may also be included.**

Terms quantifying Call Centre objectives

- Total Work Time
 - Amount of time spent being staffed in the split / skill, whether talking to clients or not.
- Agent Occupancy
 - Amount of total time the agent is occupied on ACD calls as a percentage of their total work time.
 - Formula = $[(\text{Total ACD Time}) / (\text{Total Work Time})] \times 100$.
 - Must be maximized, but at the same time, agent burnout should be avoided.

Basic goal of the contact center is to increase profits, increase market share, decrease cost by minimizing agent labor costs, and all the while maximize caller satisfaction.

Overview of ACD Hunt Groups

- The ACD directs a high volume of calls to virtual groups of telephone extensions or agent login IDs called hunt groups. They are logical groups of telephone extensions or agent login IDs.
- Each ACD hunt group is created to be staffed by agents skilled in one or more services. For example, a travel company operating a call center might create ACD hunt groups for travel enquiry, bookings and grievances.
- In an Avaya Call Centre, the hunt group provides the settings that define how the switch sends calls to agent extensions.

Splits and Skills

- The basic structure for grouping agents to provide ACD call distribution is the hunt group.
- Depending on the call distribution method, it is called a split or a skill.
- There are 3 ACD hunt group configurations
 - Without call vectoring
 - Agents are pre-assigned to ACD hunt groups called splits.
 - With call vectoring
 - Call treatments are defined via vector commands programmed by the customer. Calls are queued to splits via vector commands.
 - With Expert Agent Selection (EAS)
 - Overlays vectoring enabled ACD and hunt groups become skills. Agent members are defined on Agent Login IDs.

Staffing Multiple Splits / Skills

- With ACD hunt groups configured as splits, one agent can log into upto 8 splits at a time.
- When hunt groups are configured as skills, each agent can be logged into upto 60 skills with varying skill “levels”.
- Skill levels quantify the level of expertise of each agent for a particular task. Skill levels can be from 1 to 16, with 1 being the highest skill level and 16 being the lowest.

Types of ACDs in Avaya Call Centers

- ACD without Call Vectoring (Traditional ACD)
 - **The hunt-group (called splits) defines the physical extensions for member agents as well as defining the agent selection methods and other properties that are applied when the assigned agents log in.**
 - **Agents are defined as physically existing extensions in the system. Agents log in using those assigned extensions. Free-seating is not possible in this system.**
 - **Each agent terminal is equipped with a separate set of work buttons for each split they log into.**
 - **Only two types of call distribution allowed – DDC and UCD-MIA.**
 - **All calls routed to the split has the same treatment**
 - **Two level priority queuing is allowed.**

Types of ACDs in Avaya Call Centers

- **ACD with Call Vectoring**
 - **Calls route to a virtual phone number called VDN (Vector Directory Number), instead of the split extensions.**
 - **ACD hunt groups are still splits with physical agent extensions assigned to them as members, but call treatments are provided by vectors, which is a sort of call-handling script written using specific defined commands.**
 - **Vectors provide for flexible call treatment.**
 - **One or more VDNs can point to the same vector.**
 - **4 level priority queuing can be done via vector commands.**

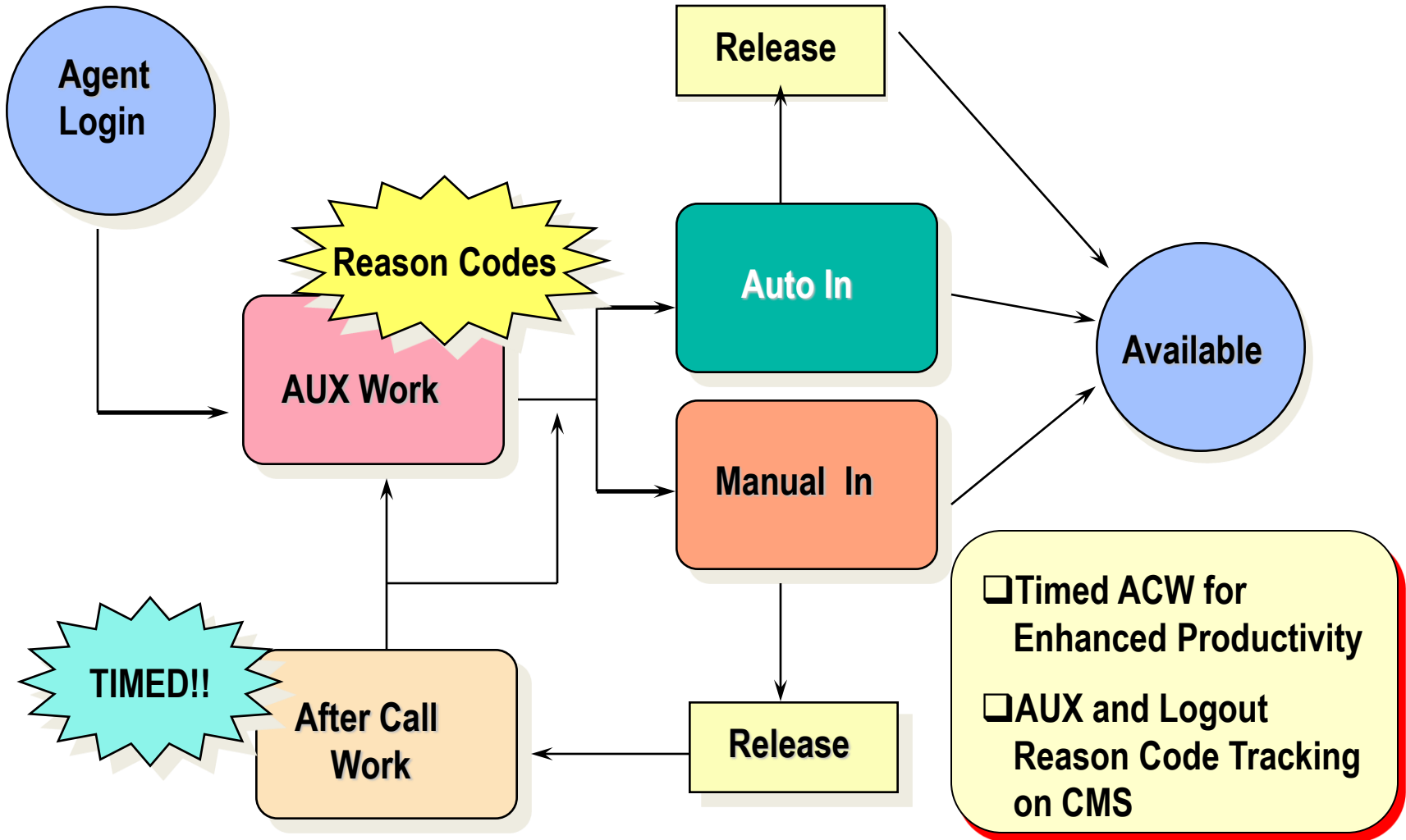
Types of ACDs in Avaya Call Centers

- Expert Agent Selection (EAS) built on Call Vectoring
 - When EAS is activated
 - Overlays Call Vectoring
 - ACD Hunt Groups become skills
 - **The ACD Hunt Group does not define its members as physical agent extensions.**
 - **Each agent is provided an ACD login ID which tells the system which skill can the agent log into and what level of expertise should ACD expect from an agent in each skill assigned to him.**
 - **Agents can log into ACD via any physical extension, and only one set of work buttons are required.**
 - Provides even greater flexibility and specific routing algorithms to get the calls to the correct agents with the desired skills and skill levels.

Call Distribution Methods

- Direct Department Calling (DDC)
 - **The first agent extension defined in the hunt-group/skill form (in the administered order), is selected for taking the call.**
 - **Called the hot-seat method.**
- Uniform Call Distribution (UCD)
 - UCD-MIA (UCD Most Idle Agent)
 - **Selects the agent who has been available the longest.**
 - UCD-LOA (UCD Least Occupied Agent)
 - **Agent with the lowest occupancy level gets the call.**
- Expert Agent Distribution (EAD)
 - EAD-MIA
 - **Selects agent who has the longest available time and also the highest skill level. Skill level takes precedence.**
 - EAD-LOA
 - **Agent with least occupancy and highest skill level.**

Agent Work Modes



Agent work modes

- Auto-In
 - **Agent becomes available for processing the next ACD call as soon as he/she finishes the current ACD call.**
 - **The agent can enter ACW mode for a pre-defined time period if so administered.**
- Manual-In
 - **Agent goes into ACW mode after finishing the current call.**
 - **Agent must choose to make himself available to take the next call.**
- Available
 - **The agent is available to take the next call.**
- AUX (Auxiliary Work)
 - **Agent is unavailable to take an ACD call.**
 - **Used when agent takes a break, goes to lunch etc.**
 - **There can be upto 10 defined AUX modes pertaining to different causes for AUX work mode.**

Agent work modes (contd.)

- After Call Work (ACW)
 - **Agent unavailable to take ACD calls.**
 - **Agent enters this mode after disconnecting the current ACD call, to perform call-related activities like filling out a form or recording data pertaining to the call.**
- Call Work Codes
 - **Agents can enter upto 16 digits to record a customer defined event.**
 - **Used to classify call outcomes in CMS reports.**
- Supervisor Assist
 - **The agent can press a button and the designated supervisor station will ring. Supervisor can assist the agent.**

Call Treatments – Intra flow / Inter flow

- Unstaffed / Busy Call handling adds flexibility to ACD to handle calls in the above conditions
 - Intraflow
 - This is basically call overflow treatment for call surplus condition within the same ACD.
 - When number of calls in queue exceed a particular threshold, as defined by an administrator, excess calls can be made to overflow and get queued to a backup split / skill.
 - Interflow
 - Overflow treatment for calls in a call surplus condition within ACDs in a network.
 - When a pre-defined queue threshold is exceeded, excess calls can be made to overflow to backup splits/skills located in different ACDs in a network of ACDs.

Call Handling Methods

- Timed ACW
 - **An agent who takes an ACD call using Auto-in code is placed in ACW immediately after finishing an ACD call.**
 - **The ACW period is administered by the administrator.**
 - **After that period expires, the agent is automatically made AVAILABLE.**
 - **Agent can terminate the Timed ACW interval by pressing the Auto-in code or can extend it by pressing the ACW code again.**
- Multiple Call Handling
 - **Allows more than one call to be active simultaneously on an agent's voice terminal. Options include**
 - **None – Agent receives only one ACD call at a time even with ACD calls on hold.**
 - **On-Request – The agent can choose to accept a second call.**
 - **Forced (many-forced, one-forced, one-per-skill) – System decides when to send additional ACD calls to the agent.**

Call Handling Methods

- ROIF (Redirection on IP Failure)
 - System option to check IP connectivity before delivering a call to an AUTO-IN agent using IP phone.
 - Before call is delivered, the system checks to see if the agent using the IP phone is still connected. If the response due from the IP phone times out, the following will occur
 - **RONA will be invoked.**
 - **Agent will be taken out of service**
 - For normal human agents, they will be placed in AUX mode.
 - For non-human/AAS agents (VRUs), they will be logged out.
 - **Call is put back in queue, or sent to a RONA administered VDN.**
 - Must be manually enabled in the system
 - You can set up a timer for timeout of response to the IP phones
 - **500 to 750 ms for IP hard phones.**
 - **2000 to 3000 ms for IP agents, 5000 ms can be safely set.**
 - Special reason code can be set for AUX mode due to IP connection failure.

Service Observing - Application OR Performance

Service Observe By:

- ◆ Logical Agent ID
- ◆ Vector Directory Number (Application/DNIS)

“Thank you for calling XYZ Company. This is Joe. How may I help you?”



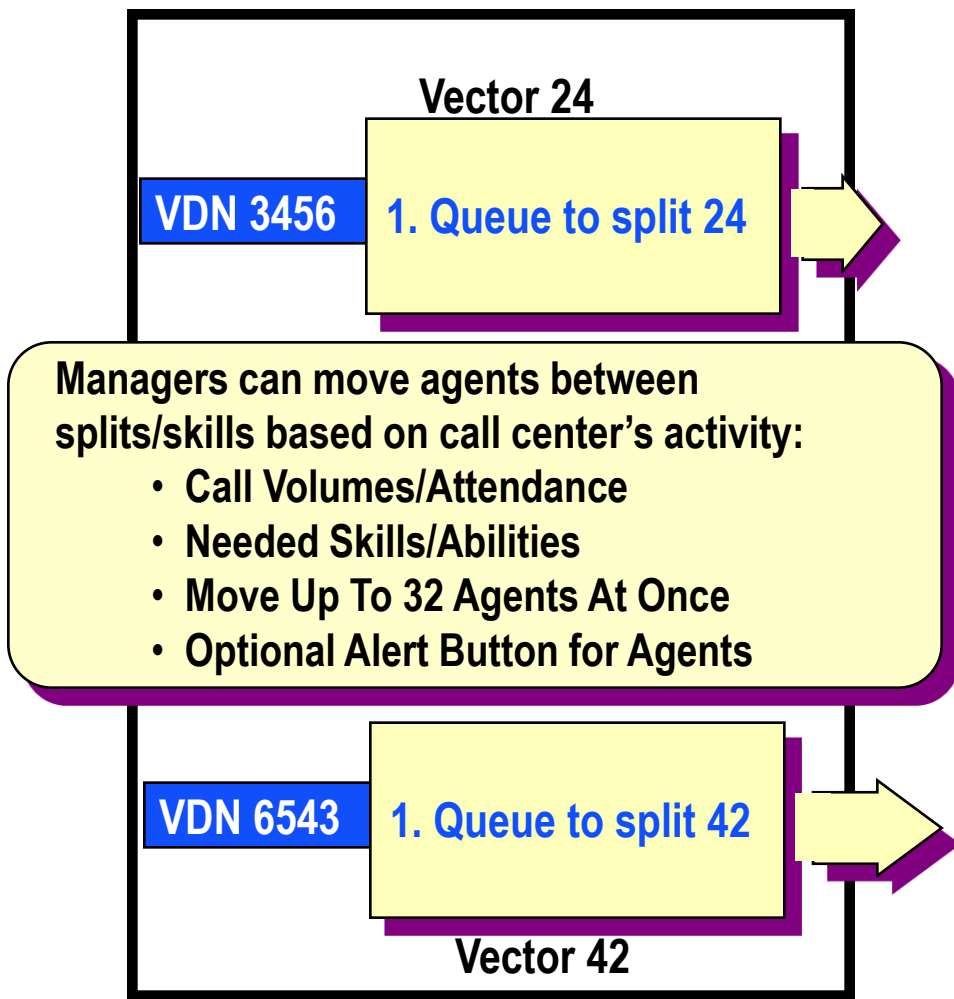
Call Center Supervisor



“Thank you for calling XYZ Company. This is Joe. How may I help you?”



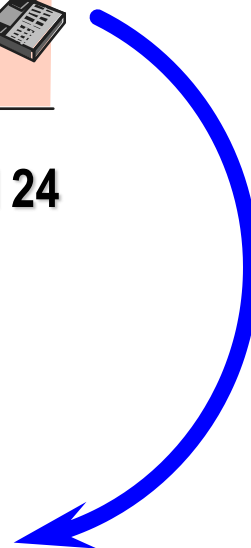
Move Agents While Staffed



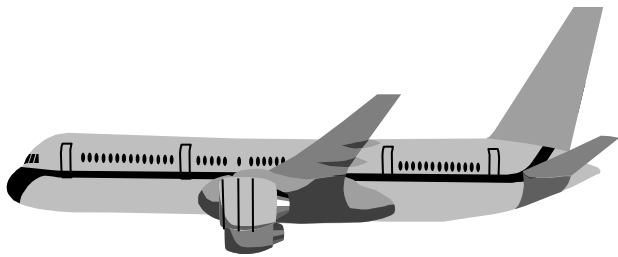
Split/Skill 24



Split/Skill 42

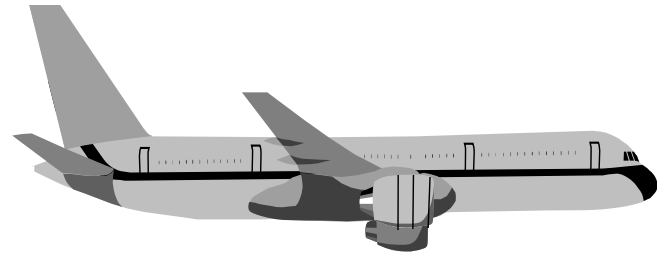


Call Vectoring



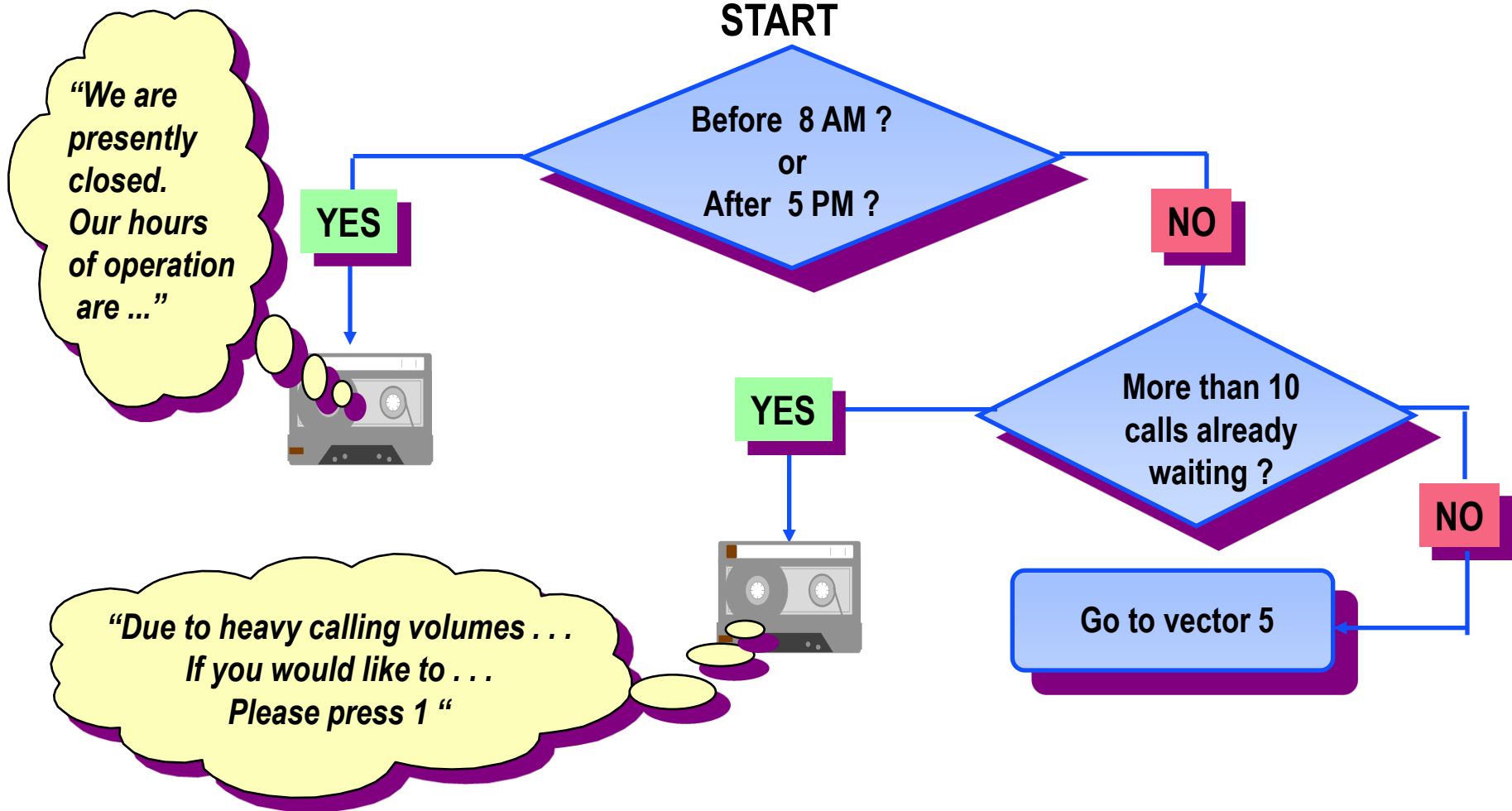
**1. Define your
Call Center
Conditions**

2. Set the Rule



Putting Your Call Center on Auto Pilot

Call Vectoring "If... Then ... Else" Program Logic



Different Incoming Call Treatment for Different Customer - Call Vectoring

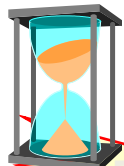
Conditions



Time of Day



Origin of Call



Expected Wait Time

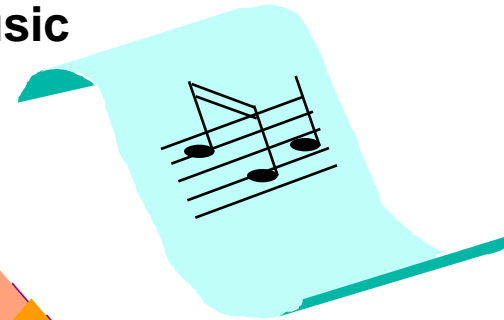
Patented



Queues

Treatments

Music



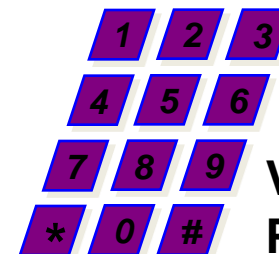
Ring



Priority



"Greetings"

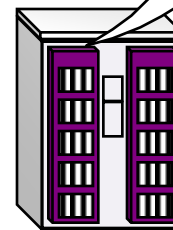


Voice Processing

Call Vectoring - Expected Wait Time Conditional

- ◆ Patented Algorithm
- ◆ Factors:
 - » Call arrival/removal rate
 - » Position in queue
 - » Priority
 - » Staffed agents

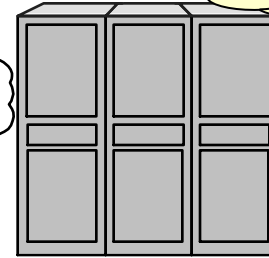
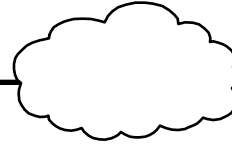
All our agents are currently busy. Your call will be answered within 40 seconds.



CONVERSANT

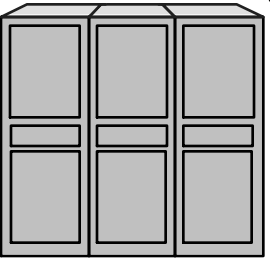
Pre-Identify the caller and his Reason for Calling

- Calling Party's Number
(Automatically sent by PSTN)



Aha! 6948527 is calling

Caller had dialled 1996948527.
He wants to get connected to
6948527.



Digits dialled by the Caller to reach You

Prompt him to dial the reason for his calling

Welcome to ABC Customer Care
Center. Please dial for 1 For Sales
2 for Service



Call Routing with a Personal Touch

Optimise Callers Time in Queue

- Inform Callers of Lengthy Wait Times

"Great! . . .
Its only a 2 1/2 hour wait!"

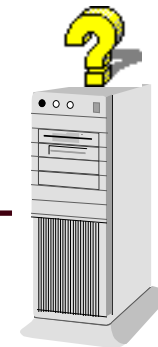
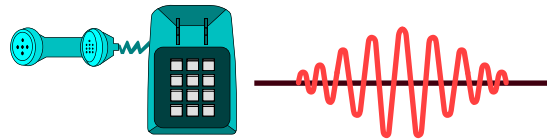
You are 387th caller in
queue. Your call will be
answered

You are 387th caller in
queue. If you want to
leave a message dial 8



Allow Callers the Option of Leaving a
Message

Give Callers access to Automated
Information



New Products and
Services
New Branches

Alert Callers to New Products, Services &
Locations

Expert Agent For Every Caller



Caller Need

Hindi Speaking

SoftwareProblems

***Excellence in
Customer Service***

Choice 1

Choice 3

Choice 2



Agent Skill Levels

- Skill 1 Hindi Speaking
- Skill 2 Software Problems
- Skill 3 Hardware Problems



Agent Skill Levels

- Skill 1 English Speaking
- Skill 2 Software Problem
- Skill 3 Hindi Speaking
- Skill 4 Hardware Problems



Agent Skill Levels

- Skill 1 Hindi Speaking
- Skill 2 Hardware Problem
- Skill 3 Software Problem

ELITE
CS

Reason Codes



- Ability for ACD agent to indicate reason for entering AUX-WORK or for Logging Out
- Separate system options (“none,” “requested,” or “forced”)
- Reason Codes tracked using VuStats and CMS
- Codes can be given customer-defined names on the switch

CTI in a Contact Center

- What is CTI?
 - **A technology that acts as an electronic bridge connecting telephones and personal computers.**
 - **Standards of Computer Telephony Integration**
 - **TSAPI (Telephony Services API).**
 - **TAPI (Telephony API).**
- Typical application of CTI – Screen-pops
 - **A screen display for call handling application and/or database information about the caller.**
 - **Presented to an agent just before the voice connection is made.**
 - **Save call handling time**
 - **Information prepared for particular call.**
 - **Appear efficient for the caller.**
 - **Personalized caller treatment.**



Let's Begin!