The Goal

Successful contact center routing designs optimize the customer experience while addressing internal business objectives for revenue, retention and operational efficiency. Careful consideration and planning are needed to architect solutions that effectively address both the customer side and the business side of the equation. The resulting designs must cost-effectively deliver low effort customer experiences while supporting all relevant touchpoints across both simple interactions and important customer journeys (e.g. new account, problem resolution, renewal, etc.).

Start with a Customer Experience Leadership Team

Business objectives should be clearly defined and understood prior to developing routing strategies.

Are the organization’s goals primarily focused on operational efficiency to control cost, or is the focus on delivering exceptional customer experiences and predictive service that grows relationships and sales?

Start by convening a customer experience leadership team to map out the intelligent routing roadmap. The team should include representatives responsible for the customer experience and contact center operations as well as technology partners. The intelligent routing roadmap should include strategies for customer segmentation, a complete list of interaction types and priorities and the resources to service each type of customer request. It should also identify any limitations or feature gaps with the existing technology portfolio that impede the vision. The team should agree in advance to roles, responsibilities, and processes for system administration, change management and problem escalation.
Best Practice Routing Design Considerations

1) Account for Customer Value through Segmentation

With increasing pressure on cost control, it’s essential for businesses to efficiently utilize resources. Customer segmentation strategies allow businesses to focus on servicing, retaining, and developing high value customers. When evaluating the handling of each customer interaction, you first need to understand the customer’s value and opportunity.

In the preceding illustration, customers are segmented into quadrants by customer value and cost. Low value/low opportunity customers should be directed to lower-cost service options including self and assisted service.

For elite customers (the top 5-10% of the customer base), companies typically do a good job of providing exceptional service, but this is often accomplished by assigning a dedicated personal representative, which is a high-touch and expensive route. This works for elite customers who generate high profits, but not for the vast majority of your customer base.

Most companies treat the remaining 90% of customers the same, as if they were all mass-market customers (e.g. “Equal service for all” and “First Come, First Served”). This approach, however, is inappropriate for the next two segments.

High-value customers (typically the next 15-20% of the customer base) are the next tier down from elite customers. These customers tend to be affluent professionals who can afford to buy more if you have a relationship with them and understand their needs, thus they serve as a potential growth engine for the company. High-value customers are typically very busy, so they’re inclined to use technology and self-service for convenience. As a result, these are customers you need to proactively engage.
The other group that typically isn’t being handled appropriately are the low-value, high cost customers. These are people whose behavior breaks your business model:

- They don’t pay bills on time.
- They frequently request refunds, returns, or fee waivers.
- They call multiple times per month or even per day.
- They aren’t satisfied with self-service because they need to explain their situation to a live rep.
- They bounce around channels until they get the answer they want.

These high-maintenance customers are bad for business, so you should either coach them how to behave more like valued customers or encourage them to close their accounts and move to your competitors. One major credit card company, for example, identified a subset of customers who were at high risk of defaulting on their debts. They proactively offered those customers several hundred dollars credit as an incentive to pay off their remaining balances and close their accounts.

So why is customer value so important when designing your routing strategy? Customer service representatives (CSRs) need to be aware of which type of customer they’re talking to so they can handle the conversation efficiently. CSRs also need specialized training and different success metrics depending on which group of customers they are servicing. For instance, CSRs handling high-value customer interactions should not be penalized for longer Average Handle Times (AHTs), and they should be rewarded for higher customer satisfaction scores, better sales results and conversations that help deepen customer relationships. The opposite criteria would be true for CSRs handling costly customers.

2) Factor in the Interaction’s Opportunity Value

Although customer segmentation usually takes precedence, value-based routing should also account for the opportunity value (e.g. sales lead or cross-sell, upsell opportunity). For example, opportunity value may be factored in when trying to prioritize the allocation of limited resources between higher value and mass-market segment customers. For instance, a mass-market customer shopping for an especially valuable product like a mortgage could be prioritized over a higher value customer shopping for a checking account (particularly if this doesn’t negatively impact customer loyalty and retention). On the flipside, imagine an unprofitable banking customer who rarely pays their bills on time is browsing mortgage rates online (even though they defaulted on their last loan and have a poor credit score). Based on the customer history and segmentation, a bank certainly wouldn’t want to proactively engage this customer no matter how valuable a mortgage is for the bank.

3) Support Cross-channel Conversations Consistently

Inbound calls have been the primary focus of call center managers for many years, and they will always play a major role in contact centers. However, as adoption of additional customer interaction channels continue to increase (with email, chat, SMS, video, social media and mobile applications), traditional call centers are challenged to evolve from a call center to a contact center and ultimately to a customer care center. This isn’t easy. Companies struggle to manage multiple interaction channels and optimize resources.
An enterprise interaction routing strategy should include all customer interaction channels and organize these tasks into a universal work queue. These tasks (e.g. a phone call for a password reset, a SMS text inquiring about a payment address, or an outbound email to follow up on a sales lead) should be managed in a centralized and consistent manner across all customer touchpoints.

Blending all interaction streams across the touchpoints drives higher CSR resource utilization while also providing career growth opportunities for contact center staff (e.g. expanding skills from phone to email and from support to sales).

4) Preserve Context Across Interactions to Manage Customer Journeys

Recognizing that most customer interactions happen within a larger journey, think beyond managing single interactions to orchestrating these broader customer journeys.

Customer Journeys are typically multi-touch, multi-channel and cross-functional events that mark the defining experiences of key customer lifecycles, and they’re anchored in how customers think about their interactions with the company (e.g. purchase, onboarding, problem resolution, renewal, etc.). Journeys represent an evolution in thinking beyond traditional touch point or moment of truth approaches.
Journeys are managed by stateful orchestration that preserves customer context across multiple interactions. This orchestration and context management enables CSRs and automated routing to know:

- WHO the customer is
- WHICH channels they have used
- WHEN and WHY they contacted us
- WHAT they need, and
- HOW the business wants to help them.

This awareness also enables the company to track and share a single view of the customer to deliver consistent, personalized and contextually aware experiences across all channels. Customers can start an interaction on one channel and then continue it on another without having to repeat themselves. They want the company to know who they are so they can receive contextualized, personalized service that makes every interaction low effort.

Preserving customer context and state across interactions also sets the stage to enable journey dashboards, comprehensive customer history views and journey analytics to support optimization of customer experiences over time.

5) Configure Business Rules Against a Universal Queue

In the preceding diagrams, all interactions are handled by a universal queue with a common routing and orchestration engine that executes business logic to prioritize each task, determine next best steps and then assign optimal resources to address it. Examples of business rules commonly employed include:

- **Time of day/day of week** – After hours handling
- **Business channel/toll-free number** – Inbound channel handling
- **Customer profile** – Information such as multi-channel contact history, lifetime value, preferences, account status, products purchased and customer satisfaction scores
- **Interaction age** – Expand resource pools and/or escalate the situation to supervisors as interactions wait for service.
- **Revenue and retention potential** – Based on customer information, is this an opportunity to expand wallet share, repair a damaged relationship, or strengthen a relationship?
- **CSR schedules** – In addition to skills, a CSR’s schedule also informs resource routing for interactions. For example, if average handle times exceed a resource’s scheduled availability, this could lead to unauthorized overtime or a sub-optimal agent transfer.
- **Last agent routing** – To address repeat callers, reduce average handle times and enhance the customer experience, calls can be routed to the last resource the customer spoke with.

Once the customer’s need is identified and the optimal handling determined, the routing engine leverages real-time scheduling to match the interaction to the best available resource. This interaction routing is the foundation for orchestrating great, low effort customer experiences.
6) Prioritize Multi-Channel Interactions to Manage SLAs

In multi-channel contact centers, each type of interaction comes with varying customer expectations for service response times. Expectations for chat and SMS text response times are similar to that of voice, with consumers typically expecting a response within 30 seconds to a minute. On the other hand, customers sending emails typically expect a response within four hours. The routing design therefore needs to manage response times across all interaction channels within the centralized routing engine.

While the service level for an inbound voice call is much higher than for an email, we still need to make sure the email gets answered. The routing strategy should assign a priority level to every interaction. This prioritization is factored into delivering the next piece of work to multi-skilled representatives. The interaction with the highest priority value is the next one delivered. When two pieces of work have the same priority level, the oldest waiting interaction is handled first.

To ensure lower priority interactions don’t get permanently buried in the queue, you should define rules where interaction priority increases by X every Y time interval. In the following example, note that as of 1pm the email interaction has the lowest priority in queue. The two voice calls will be handled prior to the email.

To prevent the email from being trumped by a steady flow of inbound calls, you should increase the priority of emails by a number of points every 30 minutes. In this case, the email becomes a higher priority for email skilled representatives to handle than even inbound voice calls after two hours.

7) Leverage Self-Service and Proactive Notifications Where Possible

When understanding customer intent and the desire for low effort interactions, self-service often delivers the best customer experience. It’s certainly the most cost-effective interaction.

With a power outage as an example, the first question from a customer is typically “are you aware that my power is out?” The second question is “when will I get it back?” Rather than having the caller wait in extended hold for an agent, the best treatment is likely a proactive IVR response to provide the customer with confidence their concern was heard, a brief description of the problem being resolved, and an expected timeframe for resolution. These self-service and proactive notifications then help free up CSRs to service more involved customer requests. Service providers can be truly proactive by next sending callers an SMS notification or automated voice message once power is restored. This is one of many examples of a quality customer experience that also results in cost savings for the business through inbound call deflection, a win-win for everyone involved.
With that said, deflection shouldn’t be the only focus for a successful interaction routing strategy. By understanding current customer conditions, many times it’s in the company’s best interest for the customer to speak to a CSR. For example, a long-standing customer calls in upset about new pricing plans. The interaction is routed to a CSR who fails to resolve pricing complaints to the customer’s satisfaction. The customer is angry and leaves negative scores and comments in the after-call survey. A few days later the customer calls in to cancel their account. The routing should identify the customer along with their recent survey results, then increase the priority of the interaction beyond self-service to route the customer directly to a resource retention specialist.

Dynamic business rules should always take the customer’s profile and past interaction history into consideration to maximize the value of every customer interaction.

**8) Route Intelligently Based on Skills, Skill Levels, Utilization & Frequency**

Defining CSR’s skills based on ACD queues or types of calls is no longer sufficient. In the prior example, the business needed to route the interaction to a resource qualified to both answer general questions and repair damaged relationships. With a true skills-based routing approach, combinations of CSR skills and skill levels can be leveraged to best match customer requests with CRS capabilities.

The diagram above depicts the resource selection for two customer interactions in different customer value tiers. Terry Titanium is a high value customer and Sergio Silver is a middle tier customer. In many routing schemes, Terry would always be routed to a CSR with a high Customer Service skill proficiency, but in true skills-based routing the logic goes deeper. Terry has indicated he has a billing question, and as the routing logic looks across all available CSRs it finds Marge Middle as she has a strong knowledge of Billing (proficiency = 10). Business rules should determine the best match of customer intent and CSR skills.

In Sergio’s case, intelligent routing understands that he only has one product with the company and he was recently researching products on the company web site. Business rules determine this is an excellent sales opportunity, and the routing engine identifies Frank Feelgood as the best resource (Upsell=10). CSR skills like sales closure, empathy, escalation, retention and geography can be effective differentiators for companies looking to route the opportunity to the best-fit resource.
Routing decisions based on skills and skill levels can additionally be combined with real-time statistics to determine not just the most experienced CSR with the right skill profile, but rather the best available CSR with the right skill profile. To avoid burning out your best resources for each skill, you should consider how frequently and recently a CSR has handled an interaction requiring a particular skill type. Intelligent routing monitors interaction assignments to ensure highly skilled CSRs aren’t over-utilized while less proficient resources sit idle. For example, if a CSR has just completed a training course for skill A, that CSR should receive a higher percentage of A-type interactions following the training to ensure they have the opportunity to put their new skills into practice. Similarly, CSRs should receive interactions that require their non-primary skills on a frequent, rotating basis so they remain competent across skill areas.

9) Motivate CSRs for Long-Term Career Path Growth

Leading organizations take advantage of enhanced skill profiles to create CSR career growth paths. Recognition is a top employee motivator, and the most effective recognition isn’t always monetary. CSRs can be rewarded as they gain skills and proficiencies, often being recognized through certifications, balloons, schedule preferences or status rewards (like attaining martial arts belt colors).

In the diagram above, CSRs in the traditional contact center hierarchy only see growth opportunity in one of the 23 Manager/Coaches positions above them. This could lead to feelings of being stuck in a dead-end job and result in higher CSR turnover. The hierarchy on the right depicts the structure of an enhanced skills-based routing configuration. CSRs starting out with phone skills see growth opportunity in adding email to their skill set. At a higher level, other CSRs can service phone and email interactions, but have also proven very proficient at closing sales. This skills-based approach gives entry level CSRs something to aspire to as they learn new skills and delivery greater value for the company. Multi-skilled CSRs also tend to have much longer tenure with organizations.

10) Dynamically Expand CSR Selection to Reduce Wait Times

Ideally, a company would like to have their best CSRs handling all high value customers, but demand often exceeds available resources. It’s essential in these cases to have a backup pool of CSRs to reinforce staff and avoid long wait times. Skills-based routing allows companies to create a cascading CSR selection scheme that expands the target CSR resource pool as interactions age.
In this example, we have an interaction that requires service from a CSR who has the Policy Service skill. The routing logic first looks for availability within the pool of the most experienced CSRs (proficiency = 10). This proficiency level represents resources with the most experience handling Policy Service calls, and therefore they are most likely to deliver a great customer experience.

While it’s desirable to get customers to the best-fit resources, the routing strategy must balance this with availability to manage customer wait times. In this example, we’ll wait ten seconds for proficiency 10 CSRs to become available before expanding the target group. Three additional CSRs are proficiency 7 for the Policy Service skill, so they can also adequately handle these customer interactions.

Once the timeout expires on the first target group, the routing platform looks for available CSRs across both groups. If no CSRs are available, the interaction will queue and be routed to the next available resource in the combined group. This process of dynamically expanding the target CSR pool takes the principles of traditional contact center skilling and allows business customers to further segment the resources to reflect expertise. By targeting the best resources when available but expanding the target pool when needed, this approach dynamically balances fast response times with optimal customer experiences.

11) Borrow and Lend CSRs Across Departments to Handle Demand

In addition to cascade routing expansion based on CSR skills and skill proficiencies, there’s another dimension to the balancing act of intelligent, dynamic routing. Businesses should consider specifying borrowing and lending conditions to put boundaries around cascade routing into overflow skills. This concept of systematically borrowing and lending resources from one group to another removes the need for supervisors to constantly monitor queue performance and make changes to CSR skill profiles.

In the previous example, the routing logic was targeting CSRs with proficiency 10 and also proficiency 7. There may be situations where high contact center volume drives the need to further expand the resource pool. In this example, we’re now including CSRs from another line of business that have the Policy Service skill at proficiency 5 as well as a Claim Service skill at proficiency 10. The system uses business rules and real-time statistics to evaluate whether the Claim group is allowed to help with the Policy Service interactions. In this case, we have defined the following borrowing and lending rules:

- The Policy Service call type has a business rule that states Borrow skilled resources if service levels for Policy Service calls that day are <60%. As long as service levels are above this guideline, Policy Service interactions will be routed normally. If the service levels are not meeting expectations, then the system will look to other groups for help.
• The Claim call type has a business rule that states allow lending of Claim Service skilled resources if service level is >=85%.

For each interaction, the service levels for these groups are automatically evaluated and the routing engine determines if borrowing is allowed to reduce wait times. In this example, the current service level for Policy Service is 53% and the current Claim Service level is 90%, so the target group of CSRs is temporarily expanded.

An available CSR from this larger group can now receive the Policy Service interaction. Subsequent interactions are similarly evaluated against current service levels, and the target groups will dynamically expand or contract to balance service levels across interaction types. By incorporating the dynamic borrowing and lending conditions into the routing logic, businesses can share resources across lines of business to improve the customer experience without negatively impacting service level objectives for the lending group.

12) Employ Data-Driven Routing Configuration for Flexible Simplicity

Building a strategy that considers customer value, opportunity value, priority rules, your resources, skill levels and contingency planning is challenging enough. As time goes on, requirements also change. It’s critical to incorporate a design that enables flexible simplicity when applying those changes. As a simple best practice, develop routing strategies that are driven by variables populated from external data sources. This configuration by variables greatly improves both environmental stability and time to market for routing business logic changes over time. When adjustments are needed for items like skill expressions, target timeouts, service level goals, or virtual queues, you can apply those updates through configurable variables rather than wasting cycles rewriting and regression testing routing logic.

In the previous Policy Service example, we had a ten second wait time for proficiency 10 targets before expanding the target to include proficiency 7 CSRs. This configuration could be stored in a database and look something like this:

<table>
<thead>
<tr>
<th>CALL TYPE</th>
<th>POLICY SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority</td>
<td>50</td>
</tr>
<tr>
<td>Increment</td>
<td>5</td>
</tr>
<tr>
<td>Seconds</td>
<td>30</td>
</tr>
<tr>
<td>Borrow SL</td>
<td>60%</td>
</tr>
<tr>
<td>Nbr Targets</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TARGET 1</th>
<th>TARGET 2</th>
<th>TARGET 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Type</td>
<td>skill</td>
<td>skill</td>
</tr>
<tr>
<td>Skill</td>
<td>Policy Service = 10</td>
<td>Policy Service = 7</td>
</tr>
<tr>
<td>Timeout</td>
<td>10</td>
<td>120</td>
</tr>
<tr>
<td>Virtual Q</td>
<td>VQ_PolicySvc</td>
<td>VQ_PolicySvc</td>
</tr>
</tbody>
</table>
In the preceding table on the left, a business user can adjust call priority, the increment value and the interval time that the priority increases (i.e. increase 5 units every 30 sec). Users can also define the service level value for borrowing resources to meet high demand. The right table shows the cascading target array used for routing this interaction type. The first target is the CSRs with Policy Service skill with proficiency 10 and a ten second timeout. This table also populates the Virtual Queue used for reporting. After the ten second timeout for target 1, target 2 is included opening up routing to Policy Service CSRs with proficiency 7. The routing logic continues to evaluate these two groups for 120 seconds (2 minutes) until it directs the interaction to offer a callback (avoiding lengthy hold times while connecting the customer with the right agent to assist them).

If supervisors determine that the proficiency 10 CSRs provide superior service, drive higher customer satisfaction rates and better first call resolution, they may choose to wait longer for this resource group to become available before expanding the target criteria. A business user only needs to update the timeout value for target 1 in the table to apply this optimization, and the new logic will apply to the next interaction that flows through the routing strategy.

No changes to infrastructure or logic flows in the environment are needed. This example illustrates the power of the dynamic routing to enable flexible simplicity for intraday changes

### 13) Optimize the Customer Experience through Reporting & Analytics

By leveraging detailed reporting and analytics, you can understand whether business rules and routing logic are producing the expected results. In the example above, management was able to utilize CSR performance data to drive changes to interaction routing logic and improve the customer experience. Access to key data coupled with a data-driven routing strategy provides the visibility needed to improve interaction handling. Beyond traditional contact center measurements like queue time, talk time, and hold time, it’s important to capture data that allows the business to identify customer types and business channels as well as understand customer interaction history. Reporting that bridges interaction and business information helps determine how business rules and services are performing.
An example of a strong interaction data set might include:

This example illustrates that in addition to the traditional queue and handle time information for these interactions, there are important data elements that can drive business decisions. Customer Info (CustInfo) can be joined to data warehouses to include customer profile information such as customer segmentation, value and upsell opportunity. The calling phone number (ANI) can be cross-referenced against customer data or for geographic analysis. The Skill column shows the skill and proficiency level for the CSR that received the interaction, enabling call handling analysis by proficiency (7s vs. 10s) to determine the impact of proficiency level on the customer experience. The VQ column marks interactions to include in the aggregate virtual queue reporting. The Last VRU column shows the last menu navigated in the voice response platform, which can indicate potential opportunities for VRU enhancements to encourage self or assisted service.

The ability to slice and dice traditional interaction handling metrics by deeper dimensions improves the utilization and impact of business intelligence information. As more sophisticated customer and CSR segmentation is introduced into the environment, it’s critical that reporting groups are included in the design and testing to ensure data and reporting is available to measure customer experience and business objectives. With the introduction of customer service tiers based on their value to the company, reporting managers will be called upon to provide service level results by customer segment rather than by traditional measurements for the business channel or call type.

The screen shots below provide examples of real-time and historical reporting interfaces from the Genesys Customer Experience platform.
14) Automate Workforce Management to Optimize Scheduling & Skills

As customer segmentation and resource targeting becomes more sophisticated, it’s important to understand the impact of routing logic on reporting and workforce management. Workforce capacity planning has traditionally focused on single interaction silos and CSRs with basic skill assignments. If intelligent routing logic enables customers to jump to the front of the queue based on value or opportunity, workforce managers need to evaluate the impact on forecasting and staff planning. Organizations should start with simple logic and calibrate the results with the workforce plan. As interaction handling gets more complex, workforce management supervisors should be able to quantify results and make adjustments to keep resource planning in line.

In a multi-skilled, multichannel environment, tight integration to the workforce management platform is critical. As new interaction channels are routed through the system, they also must be included in workforce planning. Forecasting, scheduling and schedule adherence principles that currently apply to the voice workstream must be expanded into email, chat, back office work items and other non-voice interaction channels.

Creating a multi-skilled blended resource pool allows handling of non-voice interactions to CSRs during low utilization, and conversely allows handling of voice interactions by skilled back office resources during periods of high demand. This approach drastically reduces the overstaffing associated with traditional, single skill Erlang models.

CSR skill assessments and training should also be integrated with intelligent routing to ensure CSRs are achieving and maintaining targeted proficiency levels. Progressive organizations leverage skill management to gain insight into training needs, automate scheduling, and then to manage training session delivery. These workforce management services complete the loop for workforce optimization and continuous improvement of the customer experience.

Key Takeaways & Next Steps

Intelligent, skills based routing provides virtually unlimited flexibility and power to control enterprise contact center environments and deliver exceptional customer experiences. Organizations that successfully leverage these routing best practices to their full potential employ a disciplined approach following these general principles.

1. Define a clear business interaction strategy including all customer interaction channels.
2. Define and document business rules and interaction flows.
3. Document clear business requirements.
4. Document how the design maps to each business requirement with a functional test plan.
5. Create technical diagrams and flow charts of interaction handling logic for support organizations to expedite problem identification and resolution in production support.
6. Schedule adequate time for testing, defect reporting and business signoff of customer experience designs and interaction flows.
7. Execute test interaction flows in the production environment prior to introducing live customer traffic (with documented fallback plans for cutover day).
While this white paper outlines best practices for intelligent routing, ultimately these principles must be applied to each business’ unique requirements and strategic objectives and automated via software. Having a dynamic and centralized intelligent routing platform that supports these principles is a pre-requisite to delivering exceptional customer service while controlling costs across multi-channel interactions and journeys.