

**Singularity Consulting**  
Intelligent Relationship Management

**Call Center Intelligence Solution**



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## Overview

For many organizations, call and contact centers are a significant customer touch point. They are used to offer presales customer assistance, market and sell to customers and provide after sales support and service. In general, call centers require a significant investment in infrastructure and technology. The fact remains, however, that call centers remain people intensive operations with labor accounting for 70% of the cost of a typical call center.

Given the significant variable cost component in the overall cost structure of call centers, achieving efficiencies in the operational processes have a direct and significant impact on the margins of these operations. Over the past two decades, a significant body of best practices and benchmarks has been developed for call center operations. Still, performance and quality improvement initiatives are often focused on Customer Service Representative (CSR) performance and reporting on specific functions and sub-processes of the overall call process. Furthermore, reports are often departmental and the result of labor intensive processes that involve manual extraction and manipulation of data and report development and distribution.

Singularity's Call Center Intelligence solution is a process-centric solution that can significantly improve call center operations and improve customer experience and satisfaction. It combines business strategy and process transformation with powerful business intelligence technologies to provide visibility across all call center processes and operations. Standardized reports, aggregating data from various call center devices, can be distributed to all stakeholders in the organization. Executive dashboards will provide senior management with a real-time picture of the health of the call center. Finally, analysts and managers can use analytics functions for in-depth analysis.

This document provides a complete description of the Call Center Intelligence solution and the type of challenges it is meant to address. It describes the components of the solution and their features and benefits. For additional information contact us at [info@singularityconsulting.com](mailto:info@singularityconsulting.com) or call us at 877-885-7603.

## The Challenges

Call centers require significant investments in people and technology. Over the past two decades, significant attention has been paid to managing and leveraging these two resources. The result has been measurable increases in the efficiency as well as effectiveness of many call centers. Fundamental improvements in the end-to-end processes that constitute call center operations and underlie the customer experience, however, have been elusive. The major challenge in achieving process improvements have been the difficulty in providing timely and powerful intelligence (reporting, analysis, etc.). Depending on the purpose and context of the call center (outbound vs. inbound, outsourced vs. in-sourced, etc.), the lack of process visibility can manifest itself in different ways. These challenges may include:

- **Customer attrition** – How often do customers drop calls they have made to place an order? Is the abandon rate the result of long wait time or a cryptic IVR process? Is the organization losing repeat purchase and cross-sell opportunities because of poor support and service experience?
- **Excessive investment in infrastructure** – Is the corporation “over-investing” in call center devices because the utilization of the infrastructure is suboptimal and cannot be effectively controlled?
- **High cost of reporting** – How many man-hours are spent on collecting and aggregating data, producing reports, distributing these reports and responding to issues?
- **CSR attrition** – Are CSRs leaving the company because of poor capacity management or disparity in the performance levels of multiple call centers as a result of inconsistent definition of KPIs?
- **SLA failures** – Is the call center missing its SLAs because they are vaguely defined and poorly monitored?



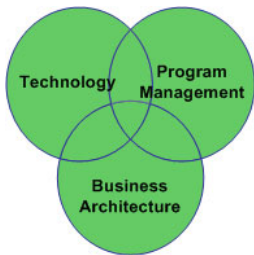
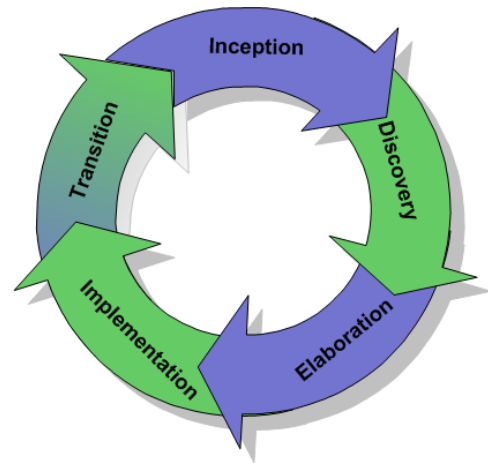
## Solution Definition

### Summary

As is the case with all Singularity solutions, the Call Center Intelligence solution is designed to be comprehensive but modular. The objective is for organizations to reach rapid but meaningful benefits through each of the individual components.

All Singularity solutions follow a standard set of principles and methodologies. They are designed to be executed in stages and produce tangible results rapidly. They address the people, process and technology dimensions of organizational and technology transformations. They focus on managing and mitigating risk. Finally, they establish clear business objectives and metrics for all technology initiatives.

In keeping with above principles, the engagement process for Call Center Intelligence solution is to be iterative. The activities for each of these phases are outlined in the engagement process at the end of this document. The document provides a detailed description of the components or modules of the solution. This section offers a high level description of the features and benefits of the entire solution.



Call Center Intelligence is a complete solution composed of business architecture, program management and technology dimensions. These dimensions are highly integrated and represent an end-to-end solution. At the same time, the solution is not based on a “one size fits all” approach. We understand that call centers come in varying degrees of size and complexity. As a result, these dimensions can easily be decoupled. Furthermore, the technology dimension of the solution can be built on a number of different platforms based on the requirements of the effort.

### Primary Features

Singularity Consulting’s call center intelligence solution is based on significant experience and expertise in business intelligence and call centers. It takes advantage of best practices and best of breed technologies in BI and applies them to the specific needs and requirements of call and contact center environments. Responding to challenges and opportunities outlined above, the solution focuses on a number of features:

- **Metadata** – The metadata repository is at the core of the solution. It provides a consolidated set of simple nomenclature and definitions for all the data that is dispersed across the call center. Identical data points that are given different and often cryptic names in various devices are given names that are easy to understand and use. This “logical data model” represents a central, consolidated and complete picture of the call center and its state. The repository also holds information about where and in which device(s) the physical data for each attribute in the logical model is stored. The metadata layer provides a consolidated repository of key performance indicators and composite attributes that are based on logical, mathematical and statistical manipulation of actual physical data. In other words, the business logic required to report on and manage the performance of a call center is available in one place as opposed to spread across the organization in Excel sheets, Access databases and individual reports.
- **Integration** – The logical model defined in the metadata layer is mapped to data generated and stored by various devices. This data is then made available directly for reporting and analysis purposes and/or



extracted and loaded into a data mart. Rules can be built around source priorities (when multiple devices provide the same data point) and data quality. Additionally, the integration server and metadata layer provide a buffer between the physical data stores and all business intelligence artifacts (reports, queries, alerts, analysis, etc.). An organization can change or upgrade a telephony device without missing a beat on the performance management front.

- **Security, Extensibility and Scalability** – The call center intelligence solution is not based on custom-built technology. Instead, it is constructed using industry leading BI technologies. As a result, it has the benefit of scalability and security features that are tested over many enterprise implementations. The open platform also allows the organizations to extend business intelligence to other functions and disciplines.
- **Powerful Information Delivery** – The solution can deliver actionable, timely intelligence to the widest possible audience in the organization through the web, e-mail and wireless media.
- **Engagement Management** – Singularity’s solution and methodology are based on industry leading program management best practices. These practices include iterative analysis, design and development process, a phased approach to major implementation, focus on risk and change management, the use of pilots and staged roll outs and establishment of a program office.

## Primary Benefits

The Call Center Intelligence Solution collects, produces and delivers intelligence about the call center operational processes in their entirety in order to achieve significant improvements. More importantly, it offers a complete picture of the “customer experience.” This intelligence can provide organizations with a number of critical benefits, including:

- Providing line managers with near real-time feedback on process performance and bottlenecks, allowing them to mitigate problems quickly;
- Enabling timely, accurate and consistent reporting of SLAs to internal and external customers of the call center;
- Providing executives with a dashboard view of financial and organizational KPIs;
- Improving customer experience and customer service, retention and loyalty;
- Eliminating the need for manual extractions, batch reporting and costly technical expertise;
- Enable sales and marketing organizations to identify and analyze issues in the sales and support process that impact branding, market share, cross-sell opportunities, etc.;
- Providing CSRs with timely feedback about their performance and that of their team, enabling self-learning and lowering attrition, one of the most common maladies of the call center environment;
- Enabling automated remediation and mitigation of many problems;
- Bringing struggling centers to “best practices” levels through standardized reporting and management.



## Inception

All successful programs are the result of a clear vision and clear planning. The goal of the inception module of the call center intelligence solution is to establish the groundwork for success.

## Features

- **Intelligence Vision** – Defines the executive vision of the future state of call center intelligence in a language that is actionable and can be communicated.
- **Program Charter** – Establishes goals and objectives for the initiative and metrics to measure success and progress. Defines the organization of the program team or office and identifies team member. Creates a roadmap and plan for the initiative.
- **Risk Management Plan** – Identifies risks and assigns probability and impact values to them. Defines mitigation plans based on risk category.
- **Change Management Plan** – Evaluates organizational culture, communication and compensation issues and makes transformation recommendations

## Benefits

- Establish clear goals and boundaries for all future activities.
- Identify stakeholders in the organization and lines of ownership (the RACI – Responsible, Accountable, Consult and Inform – Model).
- Define metrics to be used in measuring the success of the program.
- Establish executive support and identify champions.

## Activities

- Executive interviews
- Operational staff interviews
- Background review (market, organization, etc.)
- Internal communication



## Discovery

The activities in the discovery module establish a clear business case for the program and document its requirements. Also, as part of our methodology, each module includes refinements and additions to the deliverables produced previously in the process.

## Features

- **Business Case** – Establishes a balanced scorecard evaluation of the program and its costs and benefits (including ROI and TCO analysis). Identifies target technologies and roll out phases and schedule.
- **Value Realization Chain** – Captures the customer perspective on how the relationship is evaluated, established and continued. It is an extension of the “Value Delivery Chain” concept that changes the viewpoint to “outside-in.”
- **Process Map** – Captures existing first and second level processes that affect the customer experience. It also identifies critical data inputs and outputs of level one processes.
- **Metadata Model** – Defines a conceptual model of the data captured or produced by various devices and applications as well as desired information currently not available. Captures detailed information about the data including type, source, update frequency, etc.
- **Report Templates** – Captures requirements about reports including lay out and distribution frequency, targets and media.
- **Key Performance Indicators (KPI)** – Captures critical measures that need to be reported, queried or analyzed for optimal management of the call center. Includes definition of input data, calculation formulae and KPI impact.

## Benefits

- Establish a measurable set of costs and benefits for the program.
- Map the effort to its potential impact on customer (internal and external) experience and satisfaction.
- Identify opportunities for process improvement by mapping processes and their interdependencies.
- Provide a standard set of definition for operational data and key performance indicators.
- Establish agreement on report and analysis requirements

## Activities

- Technical staff interviews
- Operational staff interviews
- Technical documentation review
- Requirement workshops
- Data, report and analysis modeling
- Documentation preparation
- Internal communication



## Elaboration

The activities in the elaboration module further refine the requirements by evaluating them in the context of specific technical solutions. They establish a technical design and architecture for the solution. Also, as part of our methodology, each module includes refinements and additions to the deliverables produced previously in the process.

## Features

- **Technical Architecture** – Includes hardware and software specifications, security, connectivity, scalability and integration requirements and development, test and production environment migration plan.
- **Warehouse Design** – Physical data model for data warehouse/mart and all scripts to build the database on the target platform. Note that the solution might report directly from the underlying applications and systems or from a consolidated data store.
- **Integration Architecture** – Extraction, transformation and loading tool specification, connectivity requirements, source and target identification and data quality strategy.

## Benefits

- Establish a coherent set of standards and tools for technology implementation.
- Identify all required applications and systems.
- Establish clear design documents and specification that can be used for building a system.

## Activities

- Architecture development
- Vendor evaluation
- Data modeling
- Technical design
- Design reviews
- Internal communication



## Implementation

The activities in the implementation module transfer requirements and design specifications to a fully functional development environment. Also, as part of our methodology, each module includes refinements and additions to the deliverables produced previously in the process. Finally, the implementation module provides a major iteration point for reviewing, updating and adding requirements and design specifications.

### Features

- **Warehouse Implementation** – Build the physical warehouse and OLAP cubes (if required)
- **Integration Implementation** – Build integration routines, implement data quality policies and algorithms and populate data warehouse/mart.
- **Develop Reports and Analysis** – Build reports, test queries and develop analysis algorithms.
- **Implement Security and Delivery** – Establish roles and associated security policies. Build delivery routines and mechanisms.
- **Develop Agents** – Build feedback/write back loops (if required).

### Benefits

- Fully implement the solution in a development environment.
- Allow for iterations to modify and add requirements and design specifications.
- Unit test individual components.
- Integration test the interdependencies.

### Activities

- Development and implementation
- Unit testing
- Integration testing
- “Code” reviews
- Requirement and design iteration
- Internal communication



## Transition

The activities in the transition module implement a fully functional production environment. They also focus on informing the organization of the scope and impact of the system and train the user. Finally, they accommodate an orderly transfer of knowledge to internal owners of the solution. Also, the transition module provides a major iteration point for reviewing, updating and adding requirements and design specifications.

## Features

- **Production Implementation** – Build and load production environment.
- **System and User Acceptance Testing** – Build and test the system in a production environment and allow key users to verify that functionality meets targeted requirements.
- **User Training** – Train users in appropriate functionality.
- **Knowledge Transfer** – Transfer knowledge and documentation to internal owners of the solution.
- **Iteration Review** – Review progress, evaluate priorities and plan for the next phase.

## Benefits

- Establish a fully functioning production environment.
- Communicate the benefits and functionality of the system to the organization
- Fully train users
- Establish the groundwork for future phases

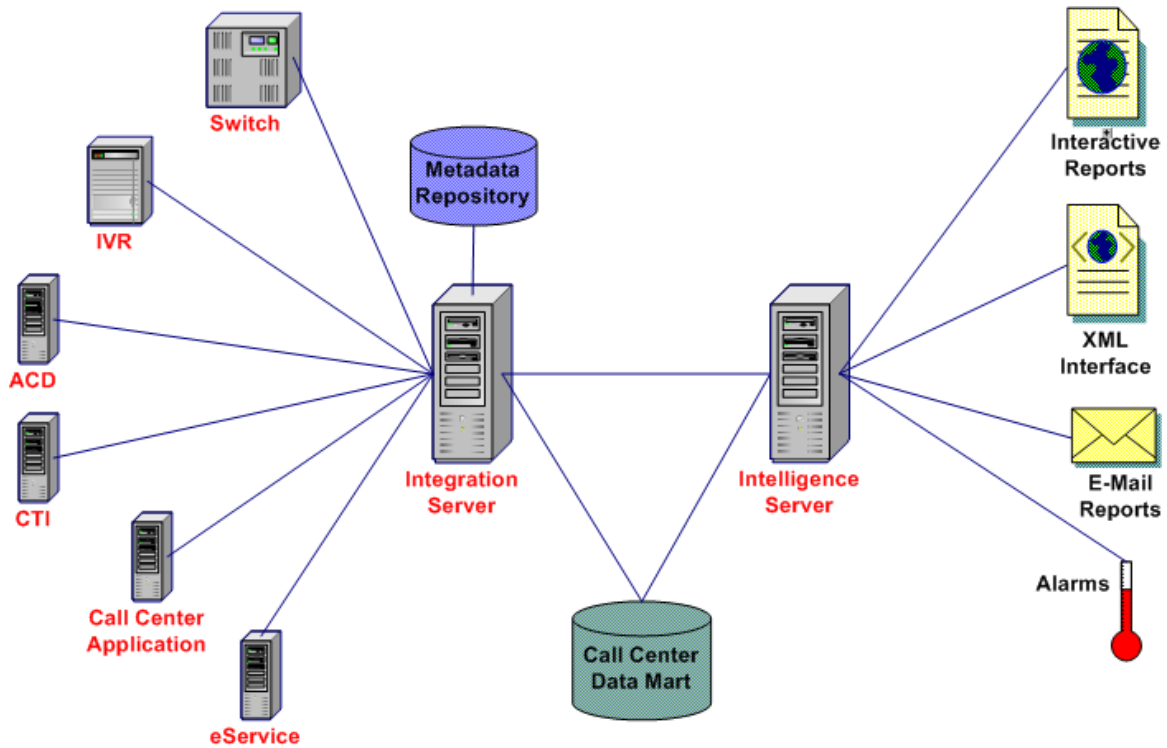
## Activities

- Production build
- Testing
- Training
- Knowledge transfer
- Program review



## Solution Architecture

The following diagram provides an overview of the call center intelligence solution. Although it depicts a typical situation, it does not include features such as write-back loops and integration with an enterprise data warehouse.





## Engagement Process

