



Effective Feedback Management

Implementing Enterprise-wide Feedback Management Processes To Improve Business Process Decision Making

September 2002, Javaway, Inc.

Introduction

The technological developments and events of the last few years have gradually transformed the networked enterprise to the extended enterprise. As corporations harness the power of the Internet in bringing together customers, suppliers, channel partners and strategic partners via this highly integrated business model, tightly controlled process execution is required.

The critical role of information collection, analysis and market intelligence formulation has been underscored by the power of the web. As business processes continue to be tightly integrated, only a layer of feedback collection processes that continuously monitor, measure and improve those processes can ensure success. In these days of severe competition, extreme difficulty of erecting barriers to entry, and significantly reduced times between the introduction of a product and the appearance of competing substitutes in the market, it is important for every organizational entity to monitor its performance and be well informed.

Web-based forms delivered over the Internet are becoming the preferred means of feedback data collection and are steadily replacing traditional mechanisms such as paper-based, in-person and telephonic interviews.

Corporations are continuously expanding and improving their ability to gather stakeholder feedback and incorporate the feedback into business processes. The accuracy and relevance of such feedback is significantly improved when the feedback management platform not only facilitates the creation of the right instruments but also provides powerful sub-systems to manage the entire feedback management lifecycle. Web-based forms delivered over the Internet are becoming the preferred means of feedback data collection and are steadily replacing traditional mechanisms such as paper-based, in-person and telephonic interviews.

This paper will explore issues in effective feedback management, discuss the enormous benefits of having the right feedback management solution in place, and illustrates how the Javelin Feedback Management platform enables the implementation of a comprehensive Enterprise Feedback Management program utilizing the Internet as the medium of delivery.

What is Enterprise Feedback Management?

A feedback collection project collects, analyzes, and reports on qualitative data about business processes obtained through survey research instruments such as paper, computer disk or web-based data collection forms. A feedback collection project is itself a process and the different phases of its lifecycle are Design, Implementation, Data Collection, and Analysis and Reporting.

Enterprise Feedback Management is the discipline of managing multiple Feedback Collection Projects covering all relevant business processes within the enterprise. The benefits of Enterprise Feedback Management include:

- Competitive advantage due to improved market intelligence capabilities.
- Utilization of best practices for performance measurement among all the business operations.

Enterprise Feedback Management is the discipline of managing multiple Feedback Collection Projects covering all relevant business processes within the enterprise.

- Formalized, visible and more efficient use of scarce market research resources.
- Ability to obtain a unified view of the performance of all business processes within the organization.

Role of Feedback Management in Business Process Management

Businesses are inherently process centric. The core activities of an enterprise such as Operations, Product Development, Marketing and Sales, Customer Service, and Supply-Chain collaboration are all well-defined processes amenable to software automation support. During the last few years, the rise of the Internet has paved way for the *extended enterprise* – a term used to describe a network of local or geographically dispersed organizations or independent departments organized to collaboratively realize common business goals through integrated business processes. The need to support increasingly complex processes of the extended enterprise has given rise to a set of sophisticated technologies known as *Business Process Management* (or BPM for short). BPM supports the core activities of the enterprise and works through event driven triggering of tasks in a workflow modeled according to well-defined business rules.

Business processes must be continuously monitored and optimized to suit changing business conditions. The evaluation of many business processes is qualitative in nature and Feedback Management is ideally suited for measuring qualitative processes.

Whether the core processes of a business have been automated through BPM or not, performance measurement is one of the most important stages in the process cycle. Business processes must be continuously monitored and optimized to suit changing business conditions. The evaluation of many business processes is qualitative in nature and Feedback Management is ideally suited for measuring qualitative processes.

An example of a business process is the operation of a Customer Service Desk chartered to ensure customer satisfaction. The CSD receives requests for service through multiple interfaces (telephone, e-mail etc.) and acts upon the requests. One way of measuring the performance of the CSD is by surveying customers about the quality of the service received. Performance measurement in this case inherently involves feedback management.

Another example of a business process in an extended enterprise is the purchasing process. The organization publishes a Request for Quotes (RFQ), and several suppliers bid for the business. The organization then selects one or more suppliers whose quotes fulfill pre-defined business criteria. The process is usually complex and requires several iterations of information exchange. In this particular purchasing process, Feedback Management can be used at two levels – one within the process where the different parties may submit data about product preferences through standard forms, and another at the process level whereby the enterprise may evaluate the effectiveness of the process itself.

Feedback Management is also integral to various other kinds of business processes including the following typical examples:

- Market research
- Employee Satisfaction Measurements
- Performance Reviews
- Collaborative Product Development
- New Product Launch
- Supply-Chain Collaboration



The Feedback Management Program

A Feedback Management Program manages multiple Feedback Collection projects. The program therefore must have well defined long-term goals and must be formally budgeted for. In the planning stage, the sources of information and the areas in which feedback collection projects will be rolled out must be carefully identified. The following paragraphs elaborate upon the different phases of the Feedback Management Program.

Define Goals

For optimal effectiveness, the goals must comprehensively cover all areas of the corporation's business operations.

The goal of a Feedback Management program is to monitor the organization's relationships with their customers, suppliers, employees and other stakeholders on an ongoing basis. This monitoring in turn will help in analyzing the data and understanding the organization's relation with its stakeholders. The organization may need to answer such questions as "What do we need to know about our customers' purchasing patterns?"; "How effective is the employee incentive plan?"; and "What categories of products do our best customers prefer most?". Defining concrete goals will help the organization in designing a flexible Feedback Management Program that is an integral part of overall business processes, and will contribute significantly to the organization's success. For optimal

effectiveness, the goals must comprehensively cover all areas of the corporation's business operations.

The first step to setting up an effective strategy for feedback management is to understand the structure of information needs.

Determine Information Needs

Every organization performs multiple tasks. Task performance may be distributed among multiple departments and people. Each broad business process will have its own distinct information needs. The first step to setting up an effective strategy for feedback management is to understand the structure of information needs. Information collection and management is a resource intensive process, and thus it is best to collect it in an efficient manner. If the same information is needed by multiple organizational entities, the information must be collected only once and disseminated appropriately. Once the structure of informational needs is determined, the logistics of information collection must be understood. Parameters like how frequently the data must be collected, where it must be collected from (the target population), and what sampling methods to be used, must be clearly defined.

Budgeting and Prioritizing

Since data collection and analysis is a resource intensive process, it must be subject to the same ROI analysis as any business process. Having defined the structural and logistical requirements, the organization must estimate the cost of feedback management, assign priorities to each area of need, and formalize what feedback collection programs will be rolled out.

An effective Feedback Management Program must define a well-designed process and workflow for ongoing projects.

Design the Feedback Program Structure

An effective Feedback Management Program must define a well-designed process and workflow for ongoing projects. The process must create a design group, assign data collection responsibilities to organizational entities that are in the best position to collect the information, specify reporting mechanisms and templates, and define policies for such areas as system access, report publication, and data visibility.

Set up Feedback Projects

Once the overall Feedback Program is designed, individual feedback collection campaigns are conducted on an ongoing basis. The Feedback project lifecycle consists of the following distinct phases:

Program Design

This phase involves the following tasks:

- Issue Determination
- Campaign Structure Design
- Determine Target Population Characteristics
- Instrument Design and Testing

Program Implementation

The implementation phase consists of the following tasks:

- Shortlist Target Population
- Communications Management
- Opening and closing of surveys

Data Collection

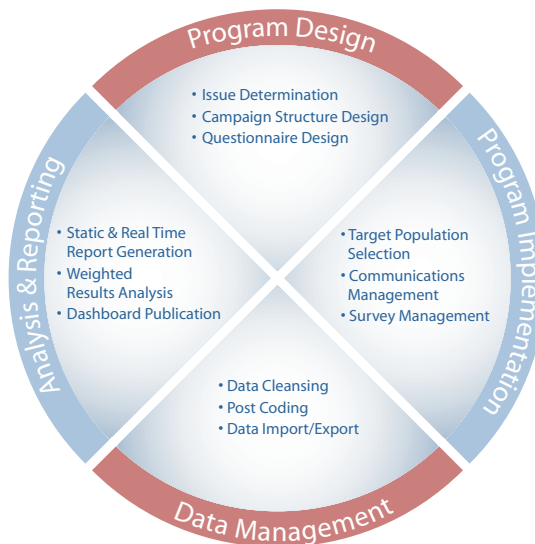
This phase is concerned with preparing the collected data for analysis. The tasks in this phase include the following:

- Data Cleansing
- Post Coding

Analysis and Reporting

The analysis and reporting phase deals with, the collected and prepared data is analyzed through

- Statistical Analysis
- Report Template Creation
- Report Generation (Static or Real-time)
- Dashboard Publication



The next few sections discuss the major tasks in greater detail and address the features within the Javelin platform that make it easy to achieve the tasks.

Issue Determination

For each project, the data collection goals must be clearly defined. This is an iterative process that identifies what issues to investigate, and what questions to ask, and may involve conducting focus group studies and test surveys. Designing feedback systems is an art and can be improved over

The Javelin Feedback Management platform enables the implementation of a comprehensive Enterprise Feedback Management program.

time.

The Javelin system enhances this process by providing template repositories where an organization can codify learning by creating special purpose templates.

Campaign Structure Design

Once the broad issues are determined, the structure of the project must be designed. The project may require the creation of multiple surveys that could be targeted at different population samples.

The Javelin Feedback Management System allows for convenient structuring of projects through its Folder Interface and advanced data analysis capabilities.

Determine Target Population Characteristics

This task identifies the profile of individuals who will be targeted for obtaining responses from. This is one of the most important steps in the planning stage because it will determine the nature and quality of information that will be gathered. The outcome of this step will also determine the sampling techniques that will be used to create the short list of survey recipients.

Powerful Statistical tools such as Confidence Interval and Sample Size calculators, and Address Book facilities for maintaining population databases provided with the Javelin platform make it easy to select appropriate population segments and optimally target communications.

Instrument Design and Testing

The feedback form and the question elements within the form must be carefully constructed. Effective feedback forms adhere to sound survey design guidelines and must be visually appealing. It is a good idea to test the feedback form at least once with small target samples. Testing allows the fine-tuning of form design and can make the difference between an effective form and wasted effort.

The Javelin Feedback Management Platform, with built-in support for such features as question routing, a wide variety of question types, ability to set constraints on response values, and the ability to embed audio-visual and rich media files, enables the creation of intelligent, effective and visually appealing forms.

Implementation Tasks

Once the research instrument design is complete, population samples must be finalized. The feedback form is then published to a location that is accessible to the target population for the appropriate duration. Communications must be used optimally to alert the target population about the status of the survey. Such communications can include

availability notifications, reminder messages, and thank you notes. By the time target recipients receive communications about form availability, the feedback form must be made available to collect data. Similarly, once the requisite amount of data is collected, the form must be closed.

The Javelin platform provides a powerful communications scheduler that can send out communications once or regularly according to user set schedules, address book facilities for organizing population databases, and a communication log mechanism for tracking outbound communications. The ability to control form availability according to pre-defined events (such as start and end dates, or number of responses obtained) is native to the Java platform.

Data Control

In preparation for analysis, the data must be cleansed to remove incomplete or spurious responses, and if needed, Post coded for enhanced analysis.

A variety of tools are provided in the Javelin platform for data cleansing and post coding. Responses to individual questions or fields within questions can be modified or all responses from a particular respondent may be deleted.

Reporting Results

After the required amount of raw data is collected, the data must be organized and analyzed. Standard statistical analysis techniques shed light on various behavioral patterns and help in recommending courses of action that can influence future behavior.

Javelin's built-in reporting mechanism offers a variety of data analysis tools including statistical summaries of response data for each question, list generation from ad-hoc queries, charts and graphs, the ability to cross compare multiple questions and report the results in either cross-tables or composite graphs. For detailed statistical analysis, Javelin allows the export of data into industry standard formats such as XML, and Comma Separated Value (csv) lists.

Considerations for Business Process Support

To be most effective Enterprise Feedback Management requires several system capabilities in various functional areas. Furthermore, in choosing a single application solution for deploying across the enterprise, technology considerations are also of high importance.

To be most effective Enterprise Feedback Management requires several system capabilities in various functional areas. Furthermore, in choosing a single application solution for deploying across the enterprise, technology considerations are also of high importance. This section examines both functional and technological factors that must be evaluated when choosing a Feedback Management Platform. Broadly speaking, the functional areas are:

- Core Feedback Methodology Capabilities
- Versatile Support Systems

- Collaborative Development Support
- Business Process Integration

Core Feedback Methodology Capabilities

Core feedback methodology capabilities deal with the essential functions of creating and administering survey research instruments, data collection and analysis, and reporting. Core functional capabilities may again be classified into three areas. These are:

Presentation functions such as

- The ability to support different types of questions
- Controlling questionnaire layout (question per page, section per page, or entire questionnaire on one page)
- Displaying progress meters
- Customizing the appearance of the web pages, the footers and the headers in support of corporate branding.

Behavioral functions such as

- The ability to check for login authorization prior to responding
- Routing to different question sets based on responses
- Real-time error checking to improve validity of responses

Response analysis functions such as

- The ability to generate statistical tables and different types of graphs.
- The ability to combine data across multiple input fields or questions for cross-tabulation.
- The ability to extract raw response data in industry standard formats for export to dedicated data-analysis tools.

Versatile Support Systems

In addition to the core system functionality, effective feedback management requires the support of various sub-systems that manage communications, enable policy-based system access, support collaboration and facilitate business process integration.

Rapid Prototyping and Accelerated Questionnaire Deployment

Once the feedback management program is underway, new survey instruments rarely need to be designed from scratch. Each department may have a few standard types of questions or questionnaires that are reused periodically. The ability to create templates and store them as libraries is therefore an important capability. Once the libraries are created, whole or partial questionnaires can be copied with ease. If care is taken to test the questions before the templates are created, the reuse of reliable questions further reduces development time

In addition to the core system functionality, effective feedback management requires the support of various sub-systems that manage communications, enable policy-based system access, support collaboration and facilitate business process integration.

and accelerates survey deployment. For many enterprise feedback projects, the relevance of responses is often lost due to the inability to reach the intended audience in time. Thus the importance of rapid prototyping and accelerated deployment capabilities in increasing the relevance of response data cannot be overstated.

Effective Communications Management

Effective communications with the target population can increase the response rates and thus help increase the validity of results. The same communication approach may not be optimum for different types of audiences and surveys. For example, in the case of an internal study such as a 360-degree review, it is generally appropriate to send out periodic reminders to the internal audience (the employees of the company), but it may not be appropriate to send out more than one reminder to external customers. Similarly, it is always better to send out reminder messages only to those recipients who have not yet completed the questionnaire rather than blanketing all recipients with a generic e-mail. Thus such features as the ability to filter address lists, schedule one-time or repeating messages, import address lists from various external databases including LDAP servers, track communications history, vastly improve the outcome of the feedback management process.

Response Analysis

Once raw response data are collected, depending on the level of data analysis required for the particular feedback project, a range of statistical tools might be required. For most basic to moderately complex reports, the ability to generate summary statistical tables, and various types of charts and graphs provides the insight into the statistical significance of the results. The integration of such data analysis tools within the feedback management platform provides rapid data analysis capabilities as well as a standard means of interpretation of the results for all users within the enterprise. In cases where further analysis is required, the ability to export the response data in standard formats such as XML or CSV lists for use in external tools is required.

Reporting

Report generation and distribution are two of the most time consuming steps of the feedback process. Multiple reports with widely different levels of detail may need to be distributed to different audiences. For example, a department manager may need access to detailed real-time reports while the President of the company may only require quarterly snapshots of high-level data. If the reporting tool is external to the system, then valuable time is lost in data

export and preparation before meaningful reports can be generated. Creating real-time reports also becomes challenging. The Javelin Feedback Management platform allows the creation of multiple Report Definitions (the specification of a report structure) for the same survey. Reports can be specified to be real-time or generated on demand and published to web-based dashboards.

Collaborative Development Support

Large campaigns require multiple stakeholders to collaboratively design different aspects of the campaign, often through more than one survey per campaign. Focus groups tasked with designing survey instruments rely on effective collaboration and multiple design-discuss cycles to arrive at the optimal program design. Thus, a tool must support collaboration among users to be able to support the overall feedback management process. Support for collaboration requires very good concurrency and policy based access control mechanisms.

Business Process Integration

Feedback Management is most effective when it is integrated with other business processes. This means that the Feedback Management Platform must work seamlessly with other enterprise infrastructure systems such as ERP, CRM and Supply-Chain systems. In the Internet era, the web delivery model is the preferred means of inter-process communication as it offers the greatest flexibility and ease of implementation. The Javelin platform provides a powerful Web Services Communications Module that simplifies integration with back-end systems.

Feedback Management is most effective when it is integrated with other business processes. This means that the Feedback Management Platform must work seamlessly with other enterprise infrastructure systems

Technology Considerations

Scalable Architecture

In order to support an evolving feedback management program, the tools that support the processes must themselves be built to scale and evolve as the need arises. Clearly, an architecture built on a foundation of scalable multi-tier technologies provides the foundation for a robust solution.

In order to support an evolving feedback management program, the tools that support the processes must themselves be built to scale and evolve as the need arises.

Ease of Deployment and Maintenance

A tool that is used by multiple designers and /or external partners must be easily deployed and seamlessly maintained. The Javelin Feedback Management System employs Web Start™ technology from Sun Microsystems Inc., to make the deployment and maintenance of the client software seamless. With just a click on a specially provided link within the corporation's intranet, the latest version of the client software is downloaded (if needed) and launched.

Ease of Integration with Other Systems

A system built within the framework of standard technologies greatly facilitates support and ensures interoperability with other enterprise infrastructure systems. Javelin's support of industry standard protocols like XML, HTTP, and HTTPS makes it easy to integrate backend systems.

Platform Independence

The advantages of a single application solution that runs independent of the hardware platform are obvious. The Javelin Platform uses the industry standard J2EE technology for both the server and the client applications. This means that the software will look and work exactly the same way on any hardware platform.

Centralized System Administration

System Administration in a multi-user environment is best performed in a centralized manner. This does not imply that IT resources or expertise is needed. Instead, centralized administration means that a single point of control must be established for administering policy-based management of system resources and system access. Thus project managers who are in the best position to know which team members need access to various levels of data, can be set up as system administrators; they in turn set up and administer access policies. System administrators also load general data such as system level Address Books, and Library Templates that should not be modified by general designers. The Javelin Platform offers versatile system administration capabilities through an intuitive, full-function, point-and-click user interface.

Self-installed or Hosted Solution

Depending on the needs of the organization, either a locally installed application or a hosted application service may be appropriate. The self-installed and administered version is ideal for large enterprises that need to have full control of the hardware, data, and administration functions. The hosted solution is ideal for quick ramp-up and in cases when the organization does not wish to commit any resources for hardware and software maintenance, and must ideally have the full power of the locally installed system available to it. In either case, if the organization desires to change its options later, it must be able to do so without loss of service continuity and transfer the entire dataset seamlessly. The Javelin platform offers both options, and since the hosted and locally installed software suites are exactly the same, no loss of functionality ever occurs.

Conclusion

In order to fully realize the benefits, convenience and expanding reach of the Internet as a medium, companies must ensure that the tools that support their feedback management program can support and scale to the requirements of the evolving information age. Implementing such a robust feedback management program will result in reduced feedback collection costs, improve the quality of market intelligence, and enable the corporation to respond quickly to market changes and thus stay competitive. By choosing the Javelin Feedback Management Platform, the initial costs of rolling out such a program can be easily recouped multiple-fold in a short time.
