

Quality Control Plan
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Quality Assurance Plan

EXECUTIVE SUMMARY

A Plan for Quality

Quality does not usually occur through natural processes. Good people, worthy endeavors, fair-minded practices, thorough planning, and pride in workmanship are among the human factors that help create quality products and services to help meet society's needs. From its beginning, J. M. Waller Associates, Inc. (JMWA) has worked to produce quality in all its products and services. As a small business, we have practiced this "quality ethic" primarily through personal presence and use of effective management methods.

As JMWA has grown in size and business line diversity, however, the company needs to sharpen its focus on quality in a more holistic manner. Most JMWA members are geographically dispersed and our core services spread across several disparate functions. These features, along with three distinct scenarios by which JMWA executes its work, make a detailed corporate quality program problematic. The company must, however, codify its approach in ways that JMWA's quality ethic is understood and visibly a part of all the company is about. This Quality Assurance Plan fulfills that need, giving JMWA a more comprehensive approach.

Core Values and Principles

The bedrock of JMWA's quality program is its set of core values and principles. These are what enable the company to foster quality in all its business activities and to integrate it through a results-oriented framework. These core values and principles include the following:

Customer-Driven Quality

Quality is judged by JMWA's customers. Thus, the company's Quality Assurance Plan must take into account each core business service feature that adds value to JMWA's customers and leads to their satisfaction, preference, and retention.

Leadership

JMWA's senior leaders set direction, clear and visible values and high expectations, and create a customer orientation. They craft the strategies, systems, and methods for achieving excellence. They help develop the entire JMWA work force and encourage participation, learning, innovation, and creativity by all members.

Continuous Improvement and Learning

Achieving performance excellence requires JMWA make an effective approach to continuous improvement and learning. "Continuous improvement" refers to both incremental and "breakthrough" improvement. "Learning" describes our adaptation to change, thus leading to new goals and/or approaches. Improvement and learning must be embedded in the way JMWA operates.

Valuing Members

The success of JMWA's quality program depends greatly on the knowledge, skills, and motivation of its work force. Member success depends increasingly on being afforded opportunities to learn and to practice new skills. JMWA must invest in developing its work force through education, training, and opportunities for continuing growth.

Fast Response

Success in a competitive market demands ever-shorter cycles for new or improved product and service introduction. Also, faster and more flexible responses to customers is now a critical requirement. Improving response time will likely require JMWA to employ simplified work groups and processes, while maintaining its bias for action.

Design Quality and Prevention

Senior managers at JMWA know front-end analysis that "designs in" quality is superior to the "spot-check and fix" approach. This Quality Assurance Plan seeks to prevent

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problems and waste by building quality into JMWA's services and products, as well as designing efficiency into key processes. At times it may also include helping customers determine changes in their own processes that would increase quality.

Long-Range View of the Future

Pursuit of market leadership requires JMWA keep a future orientation and make long-term commitments to stakeholders -- customers, suppliers, members, the public, and the communities in which our members work. Planning must anticipate changes, such as customer expectations, new business opportunities, technological growth, new market segments, evolving regulatory requirements, community expectations, and business thrusts by competitors.

Management by Fact

Successful businesses depend upon measurement and analysis of performance. JMWA is no exception and its pursuit of quality demands selection of measurements that derive from company strategy and provide critical data and information about key processes, outputs, and results. Analysis must extract the larger meaning from data and information to support improved decision making and quality at all levels within JMWA.

Partnership Development

The company will build internal and external partnerships to further its quality goals. This may include internal agreements for member development, cross-training or new work groups, such as high performance work teams. External partnerships might involve creating strategic relationships with certain firms to improve JMWA's flexibility, responsiveness, and business line opportunities.

Company Responsibility and Citizenship

Its senior leaders believe JMWA has responsibilities to the public and needs to practice good citizenship. Fulfilling basic

expectations of the company -- protection of public health and safety; business ethics; education improvement; community service and the environment -- becomes a strong enhancement to performance excellence.

Results Focus

JMWA's performance measurements must focus on key results. Leaders want company results to be influenced by and balanced with the interests of all stakeholders -- customers, owners, members, suppliers and partners, the public, and our communities. JMWA's goal is to use a balanced scorecard of performance measures to manage short and longer-term priorities, to monitor actual performance, and to marshal support for improving results.

A Systems Perspective for Quality

Quality derives from performance excellence. Performance excellence flows from effective integration of six functions that define JMWA's operations, and results -- Visionary Leadership, Integrated Strategic Planning, Customer Satisfaction and Market Focus, High Performing Human Resources, Process Management Excellence, and High Quality Business Results. (See chart at the end of this summary).

Visionary Leadership, Integrated Strategic Planning, and Customer Satisfaction and Market Focus form JMWA's "Leadership" triad. Together these functions emphasize the importance of our leaders' focus on corporate strategies and customers. JMWA leaders set company direction and seek future opportunities for the company. When our leaders focus on customers, the company as a whole embraces the same focus.

Taken together, High Performing Human Resources, Process Management Excellence, and High Quality Business Results represent our "Results" triad. JMWA members, using quality-based processes, accomplish the company's work. All company actions point toward business results -- a blend of customer, financial, and non-financial

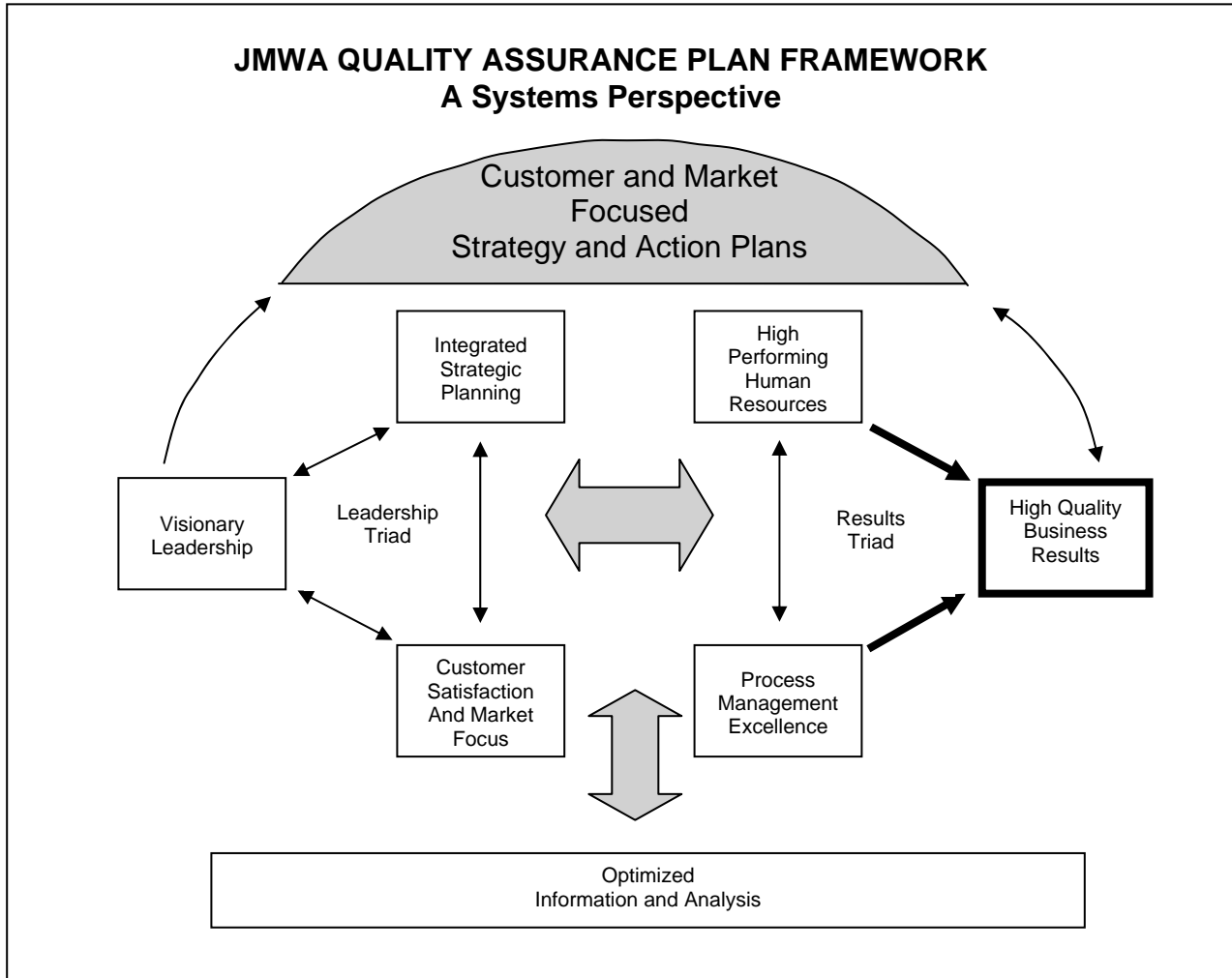
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performance outcomes, including human resource improvement and fulfillment of public responsibilities.

A seventh function – Optimized Information and Analysis -- is critical to effective

management and to a fact-based system for improving JMWA's performance and competitiveness. Optimized Information and Analysis drives the company's performance management system and our work quality.



Quality Assurance Plan

INTRODUCTION

Overview

Quality does not usually occur through natural processes. Good people, worthy endeavors, fair-minded practices, thorough planning, and pride in workmanship are among the human factors that help create quality products and services to help meet society's needs. J. M. Waller Associates (JMWA) has, from its inception, sought to provide quality in all its internal and external business dealings. As a small business, we have instilled this "quality ethic" by personal presence and effective management methods.

Having grown in size and business line diversity, however, we must sharpen our focus on quality. The increased dispersion of JMWA members and the breadth of our functional services make a detailed corporate quality program inappropriate. We need to reshape our approach, however, so that our quality ethic fully undergirds all we stand for and do. What you will read in this Quality Assurance Plan explains that approach.

Managing the Vision

JMWA's corporate logo highlights our quality bottom line. "Managing the Vision" means that we so thoroughly understand and support each customer's mission and view of his desired future that JMWA, better than any competitor firm, can enhance mission attainment. Included among our commitments to quality and added value is the intent to be an engineering, environmental, energy, management and professional services company that is:

- respected for our competitive edge, always striving to improve the quality of our services and products while controlling costs and maintaining schedule;
- successful in raising productivity through innovation, inspirational leadership, and business process reengineering; and

- trusted by our customers and partners for our abilities to listen actively, to coordinate effectively, and to act decisively on their behalf.

Our core values and principles, the plan framework, and the criteria for performance excellence described in this QA Plan are intended to educate, motivate, guide and enable all JMWA's leaders and members to provide the highest quality products and services to our customers. We want all our customers, partners, suppliers, and stakeholders to have confidence in our commitment and ability to help them succeed in their own vision of success.

The rest of this QA Plan explains our overarching concepts for achieving performance excellence. It applies corporate-wide and provides sufficient information to guide JMWA personnel in how to apply its principles to any effort, regardless of size, complexity or geographical setting. To assist JMWA members in one-person, remote project sites, this QA Plan is supplemented with a QC Plan. The QC Plan offers a template enabling those members to quickly and effectively perform their work following procedures to achieve the standard of quality described in this QA Plan. The QC Plan can be tailored if the customer requires tighter or different standards, but it will still be a consistent application of the core values and principles that JMWA has embraced. For larger programs, which either by contract or proper management requires a separate, site-specific QC plan; the principles embodied in our corporate QA/QC plans will form the basis for a site-specific QC approach in supporting our client.

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The bedrock of JMWA's quality program is its set of core values and principles. They are what enable us to foster quality in all our business activities and to integrate it through a results-oriented framework. These core values and principles include the following:

Customer-Driven Quality

Quality is judged by customers. Thus, quality must take into account all product and service features and characteristics that add value to JMWA's customers and lead to their satisfaction, preference, and retention. This value and satisfaction may be influenced by many factors throughout the period JMWA serves each customer.

Customer-driven quality means not only that JMWA products and services meet basic customer requirements. It also means the company is of such a character that it differentiates us from our competitors. One of the ways we best show such character is by the relationship we create and sustain with each customer. There is inestimable value in the following commitments we make to all our customer relationships:

- Communications that are open and timely, marked by careful listening to what product or service is desired, and by keeping the customer informed of the work we are doing.
- Continuous examination of our cost of doing business to insure the customer gets genuine value added for every dollar spent.
- Management practices that make our organizational lines transparent, where all JMWA members embrace their personal responsibility to deliver excellence.
- Employing a life-cycle view to all our work as a step to product or service completeness and overall integration.
- Constant review to eliminate internal or external barriers that degrade the quality of our support to customers.

Customer-driven quality is clearly a strategic concept. It is directed toward

customer retention, market share gain, and growth. It demands JMWA's constant sensitivity to changing and emerging customer and market requirements, and the factors that drive customer satisfaction and retention.

Customer-driven quality also means more than defect and error reduction, merely meeting specifications, or reducing complaints. Rapidly correcting any problems is important to eliminate the causes of dissatisfaction and contribute to our regard for customers. We will employ specific "recovery systems" that quickly "makes things right" with the customer.

Leadership

JMWA's senior leaders are responsible for setting directions and creating a customer orientation, clear and visible values, and high expectations. The values, directions, and expectations need to address all stakeholders. Our leaders must develop strategies, systems, and methods for achieving excellence while building knowledge and capabilities. The strategies and values will guide all JMWA activities and decisions. Senior leaders also must commit to the development of the entire work force and encourage participation, learning, innovation, and creativity by all members. Through their personal roles in planning, communications, review of company performance, and member recognition, our senior leaders serve as role models, reinforcing the values and cultivating initiative throughout the company.

Continuous Improvement and Learning

Achieving the highest levels of performance excellence requires JMWA have a well-executed approach to continuous improvement and learning. The term *continuous improvement* refers to both incremental and breakthrough improvement. The term *learning* refers to adaptation to change, leading to new goals

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and/or approaches. Improvement and learning must be *embedded* in the way JMWA operates. This means improvement and learning: (1) are a regular part of JMWA's operations; (2) seek to eliminate problems at their source; and (3) are driven by opportunities to do better. Sources of improvement and learning include member ideas, customer input, best practice sharing, and benchmarking.

JMWA best shows improvement and learning by adding value to customer endeavors. We achieve this through new and improved products and services; developing new business opportunities; reducing errors, defects, waste, and related costs; bettering response and cycle time performance; gaining productivity and effectiveness in resource use; and fulfilling public duties and service as a good citizen.

Therefore, JMWA's improvement and learning not only yield better products and services, but also give JMWA marketplace and performance advantages.

Valuing Members

JMWA's success depends increasingly on the knowledge, skills, and motivation of its work force. Member success depends more and more on having opportunities to learn and to practice new skills. We accept as non-negotiable, the need to invest in the development of our work force through education, training, and opportunities for continuing growth. These might include classroom and on-the-job training, job rotation, and pay for demonstrated knowledge and skills. Work force education and training programs may use advanced technologies, such as computer-based learning and satellite broadcasts.

Valuing members also includes integrating human resource practices (selection, performance, recognition, training, and career advancement) and aligning our human resource management with our strategic change processes. This requires JMWA use up-to-date member-related data on knowledge, technical skills, professional

ratings, project experience and leadership. Such data help JMWA better integrate and align human resource contributions with business directions.

Fast Response

Success in competitive markets demands ever-shorter cycles for introducing new or improved products and services. Faster and more flexible response to customer needs is virtually a requirement now. Shortening our response time demands that JMWA continue streamlining and simplifying its work groups and processes

Design Quality and Prevention

JMWA emphasizes design quality – that is preventing problems and waste by building quality into products and services and efficiency into production and delivery processes. Costs of preventing problems at the design stage are lower than costs of correcting problems *downstream*. Design quality includes flowcharting and mistake-proofing our processes.

Consistent with the theme of design quality and prevention, JMWA's design improvement focuses on interventions "upstream" -- at early stages in processes. This approach yields the maximum cost and time benefits of improvements and corrections. Upstream intervention also involves JMWA's suppliers and partners.

Long-Range View of the Future

Pursuit of market leadership requires JMWA have a strong future orientation and a willingness to make long-term commitments to key stakeholders -- customers, members, suppliers, the public, and the communities where we work. Our planning seeks to anticipate changes, such as customers' expectations, new business opportunities, technological developments, new customer or market segments, evolving regulatory standards, community/societal expectations, and competitor thrusts. Our

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plans, strategies, and resource allocations reflect these commitments and changes. Major parts of our long-term commitment are developing JMWA members, establishing strategic alliances and fulfilling our public responsibilities.

Management by Fact

Growing businesses rely on performance measurement and analysis. JMWA's approach is fact-based, derives from the company's strategy and provides critical data and information about key processes, outputs, and results. Data and information we measure for performance and improvement will cover customers, product and service delivery, operations, market, competitive comparisons, supplier, member-related, and financial.

Our analysis looks to extract the larger meaning from data and information to support evaluation and decision making at all levels within JMWA. Such data and analysis support a variety of JMWA purposes, such as planning, reviewing business performance, improving operations, and comparing company performance with competitors or with "best practices" and benchmarks.

A major consideration in our performance improvement involves the creation and use of performance measures or indicators. The measures or indicators we select should best represent the factors that lead to improved customer, operational, and financial performance. Such a complete set of measures or indicators tied to customer and/or JMWA performance requirements represents a clear basis for us to align all our activities.

Partnership Development

JMWA sees great value in building internal and external partnerships to better accomplish the company's overall goals. Internal partnerships can include regional office collaboration on marketing and proposal development. Agreements might

entail member professional development, cross-training or new work groups. Internal partnerships might also involve creating network relationships among company work groups to improve flexibility, responsiveness, and knowledge sharing.

JMWA seeks to establish external partnerships with customers, suppliers, and educational organizations for a variety of purposes, including education and training. An increasingly important kind of external partnership for JMWA is the strategic partnership or alliance. Such partnerships may offer us entry into new markets or a basis for new products or services. A partnership also permits the blending of our core business services or leadership capabilities with complementary strengths and capabilities of partners, thereby enhancing our overall capability.

It is JMWA's intent that internal and external partnerships develop longer-term objectives, thereby creating a basis for mutual investments. We and our partners address together the key requirements for success, means of regular communication, approaches to evaluating progress, and means for adapting to changing conditions. In some cases, joint education and training can offer a cost-effective means to develop members.

Company Responsibility and Citizenship

JMWA's senior leaders advocate and exemplify the company's responsibilities to the public and our need to practice good citizenship. These responsibilities are basic expectations of the company -- business ethics and protection of public health, safety, and the environment. Company planning anticipates adverse impacts from our operations and disposal of products. We therefore look to prevent, not create problems, to provide a forthright company response if problems occur, and to make available information and support needed to maintain public awareness, safety, and confidence. JMWA will not only meet all local, state, and federal laws and regulatory

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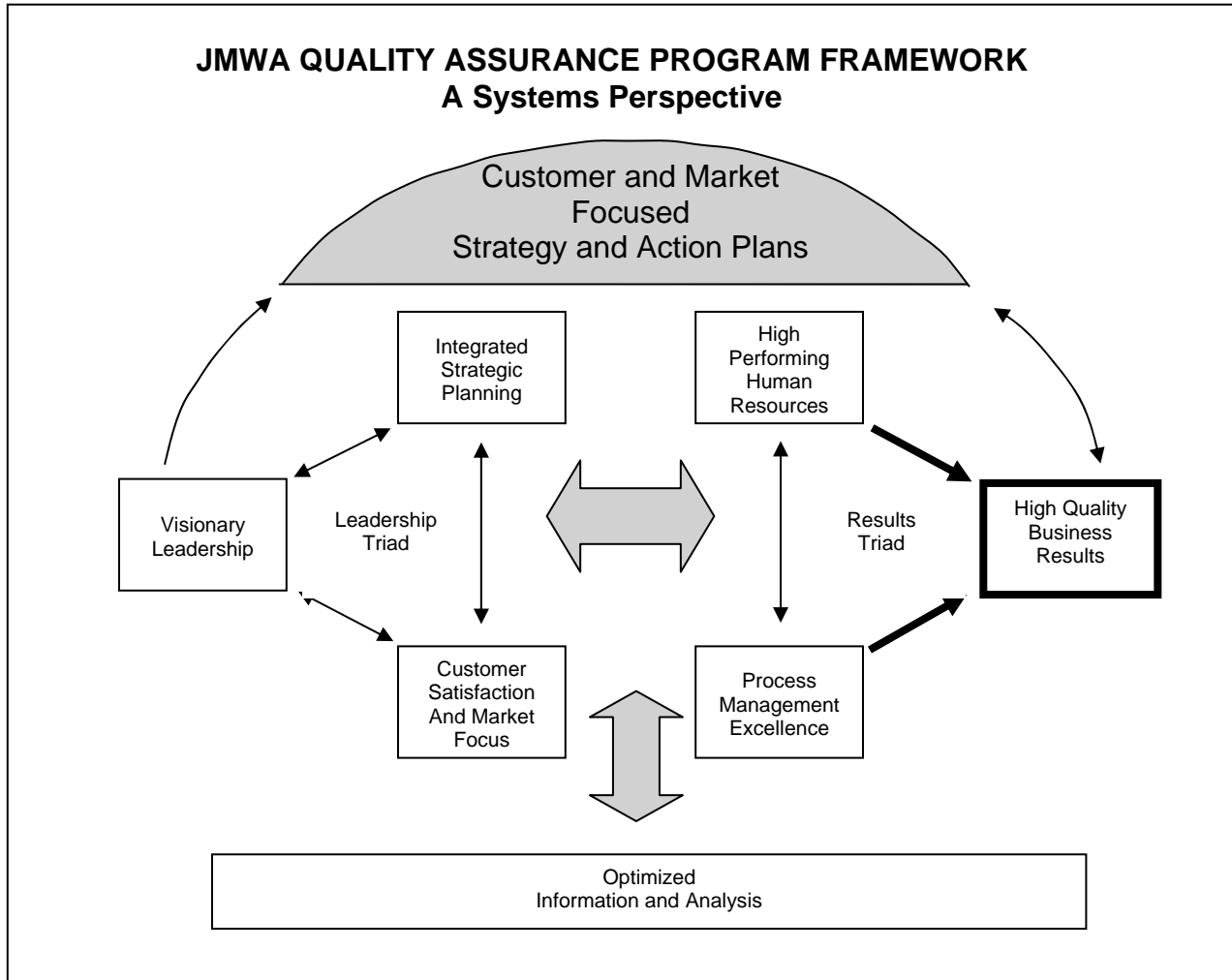
requirements. We will treat these and related requirements as areas for continuous improvement “beyond mere compliance.” This approach requires us to identify appropriate measures in managing performance.

Practicing good citizenship describes JMWA's leadership and support -- within limits of a company's resources -- for important public purposes, including areas of public responsibility. These may include education improvement, improving health care in the community, environmental excellence, resource conservation, community services, improving industry and business practices, and sharing of nonproprietary information. Company leaders exemplify JMWA as a corporate citizen, and also seek to influence other organizations, both private and public, to partner for these purposes.

Results Focus

Like most quality-based companies, JMWA's performance measurements focus on key results. Results should be guided by and balanced by the interests of all stakeholders -- customers, members, suppliers and partners, the public, and our workplace communities. To meet the sometimes conflicting and changing aims that balance implies, JMWA's strategies explicitly include all stakeholder requirements. This approach helps ensure that actions and plans meet our differing stakeholder needs and avoid adverse impact on any stakeholders. Our use of a balanced scorecard of performance measures offers JMWA an effective means to communicate short- and longer-term priorities, to monitor actual performance, and to marshal support for continuously improving our results.

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The six categories of criteria for performance excellence described in this section form an integrated, results-oriented framework that collectively expresses JMWA's Quality Assurance Plan. This framework rests on the core values embraced by corporate leaders. The QA Plan is intentionally focused at a high level, and is relevant to all the company's efforts, regardless of size, geographical dispersion or customer.

Visionary Leadership

A description of JMWA's leadership system, values, expectations, and public responsibilities.

As an element of JMWA's QA Plan framework, Visionary Leadership is the focal point for addressing how senior leaders guide JMWA in setting directions and seeking future opportunities. It also explains how they create a leadership system based upon clear values and high performance expectations. Finally, it addresses the company's responsibilities to the public and how JMWA practices good citizenship.

Leadership System

Through its Board of Directors (BOD) and Corporate Management Committee (CMC), JMWA's senior leaders clarify and articulate the ethical and business principles that guide the company. Inherent in this approach is a leadership system that fosters among JMWA members an ethic for

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high performance, individual development, personal initiative, innovation and organizational learning. The leaders also reinforce JMWA's responsibilities to all stakeholders, not only customers, but members, suppliers, partners, the public, and the communities where JMWA serves.

The Chief Executive Officer (CEO) and President use monthly newsletter columns to explain JMWA's values and expectations, describe the company's vision, and explain key milestones along the route to achieving it. These leaders, along with the Vice Presidents (VPs) use personal visits, townhall meetings, and "white papers" to explain our customer focus; to encourage innovation; and to communicate values, directions, and expectations.

JMWA's performance appraisal system further enhances deployment of the corporate vision and values by its two-way dialog between members and supervisors. The self-assessment component enables each member to voice aspirations and achievements. The President makes the final review in this process to assess the leadership system, to use member feedback, and to review overall company performance. This is a crucial element of JMWA's leadership system as it helps build consistency of goals. It further enables JMWA to be flexible and responsive — changing easily to new needs and opportunities. Finally, this approach promotes continuous learning, not only to improve overall performance, but also to involve all members in JMWA's ongoing pursuit of service quality improvement and increased value to customers.

JMWA purposely maintains a flat organizational structure to foster frequent, responsive communications throughout the company. Members are encouraged and solicited to offer feedback on white papers as a means of broadening the range of ideas and solutions to corporate issues. Our flat structure also gives focus and helps in aligning company work groups and key processes. Through its corporate communications network, JMWA promotes

rapid exchange of information to help achieve quality and performance excellence.

In their roles of developing strategy and reviewing company performance, JMWA's senior leaders develop leadership and shape the firm's adaptability to changing opportunities and requirements.

Company Responsibility and Citizenship

Having originated as an environmental management firm, JMWA and its founders possess strong values and expectations regarding its public responsibilities and citizenship. Even as it has expanded from this business background, these attributes still deeply influence JMWA's management practices.

JMWA makes legal and ethical standards and risk management factors integral parts of our performance excellence and quality improvement. From ensuring the current training certification of its personnel involved in hazardous waste management operations to full disclosure to government auditors of its financial accounting practices, JMWA demonstrates corporate integrity.

Sensitivity to issues of public concern, whether or not these issues are currently embodied in law, is another standard JMWA and its leaders embrace. Fulfilling societal responsibilities means that not only does JMWA meet all local, state, and federal laws and regulatory requirements in its own operations, but pursues them as well in providing services to customers. The company newsletter and Internet website are used to further publicize or make JMWA members aware of potential public concerns related to company operations or projects.

As a geographically dispersed company, JMWA faces challenges to reflect a focused practice of corporate good citizenship. Thus, JMWA leaders set personal examples for involvement through such service and professional venues as Rotary Club, American Consulting Engineer Council, Society of American Military Engineers (SAME), Army Engineer Association (AEC),

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and National Society of Professional Engineers. The company encourages all members, in whatever communities they live, to become active, contributing members and a positive influence to strengthen community services, education, religious endeavors, health care, the environment, and practices of trade, business, and professional associations. In partnership with local posts or chapters of SAME and AEA, the company has helped provide scholarships to worthy high school students.

Integrated Strategic Planning

Integrated Strategic Planning addresses strategic and business planning and the deployment of those plans throughout the company. It includes effective development

The methodology of JMWA's strategic planning and deployment of plans, with a strong focus on customer and operational performance requirements.

and deployment of business, customer and operational performance requirements derived from JMWA's strategy. Senior leaders consider customer-driven quality and operational performance excellence as key strategic business issues that must always be integrated with overall company planning.

Strategy Development Process

JMWA employs both formal and informal processes in its development of corporate strategy. Both approaches focus on how the company views the future and sets strategic directions. Quarterly CMC meetings bring together the President, Chief Financial Officer (CFO), Chief Operating Officer (COO) and VPs. These leaders discuss issues such as revenue growth, operational effectiveness, and JMWA's view of the future that includes not only the markets or segments to compete in, but also how to compete. "How to compete" carefully examines many options and includes forthright comparison of JMWA's

and competitors' strengths and weaknesses. CMC members bring to the quarterly meetings information gathered from informal fora such as professional seminars, industry conferences, business journals and publications, marketing trips, member reports, website research, and business development roundtables.

The CMC collects and evaluates information on all the key influences, challenges, and requirements that might affect JMWA's future opportunities and directions — taking as long a view as possible. The main purpose of this step is a thorough and realistic context for development of a customer- and market-focused strategy to guide JMWA decision-making, resource allocation, and company-wide management. The CMC also strives to project the competitive environment. This step helps detect and reduce competitive threats, to shorten reaction time, to and identify opportunities. As a result of this analysis of strengths, weaknesses, opportunities, and threats (SWOT), the CMC can craft a strategy for success and performance excellence

Company Strategy

JMWA's formulation of strategy flows from identifying ends, ways, and means. Having determined appropriate ends (objective goals) from the CMC's SWOT analysis, JMWA leaders apply critical and creative thinking to determine the most effective ways for achieving those ends. The CMC's final step is to allocate resources needed to support the ways selected.

On behalf of the CMC, the President presents strategy options to the BOD. Discussion may lead to adjustments in any of the ends, ways, or means. When all adjustments are finalized, CMC members begin formulating specific action plans (often functional in nature) to implement the strategy. VPs "deploy" the strategy within their responsible areas and the COO selects appropriate performance measures to review the various action plans at subsequent CMC meetings.

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The CMC continuously assesses the impacts of new or revised strategy on the High Performing Human Resource Focus, Process Management Excellence, and Optimized Information and Analysis categories of its quality program. They adjust as necessary to ensure overall integration and coherency of support. Likewise the CMC may revise the business and marketing plan as needed to reflect current company strategy. This fully supports a current, results-oriented two-to-five year projection of where JMWA is going and how it will get there.

How JMWA determines customer and market requirements and expectations, enhances relationships with customers, and determines their satisfaction.

Customer Satisfaction and Market Focus

Customer Satisfaction and Market Focus is the central focus within JMWA's QA Plan for describing how the company seeks to understand the voices of customers and of the marketplace. This category stresses relationship enhancement as an important part of our overall listening and learning strategy. Customer satisfaction surveys give us vital information for understanding expectations and marketplace trends. In many cases, such results provide JMWA with crucial information, not only on our customers' views but also on their marketplace behaviors.

Customer and Market Knowledge

JMWA uses several venues for determining emerging customer requirements and expectations. Senior leaders attend conferences; seminars, business fairs, and acquisition plan briefings. JMWA exhibits its marketing booth at similar events where potential customers and contracting offices attend. Our business development strategy targets specific potential clients for pre-marketing as a result of favorable acquisition plan data. Each senior leader is

responsible to listen and learn about future year programs and funding trends for current and potential customers.

At the start of each new project or contract, JMWA senior leaders initiate contact with the customer. Our purpose is to relate with them in an open and timely way, first by listening to understand the need behind the product or service they want and then to keep them informed on the work we are performing. Such regular contact not only identifies JMWA as a "team member" with the customer, but also helps us identify and eliminate any internal barriers that threaten the quality of what we are providing. In cases of geographic separation or travel limitations to our on-site involvement, JMWA leaders use telephone and e-mail to sustain a close relationship with customers.

Customer Satisfaction and Relationship Enhancement

Our corporate values place the highest premium on delighting every customer. JMWA wants those we serve to respect us for our competitive edge. We engender that respect by improving the quality of our products and services while controlling costs. We seek success by raising productivity through innovation and inspirational leadership. JMWA also wants its customers' trust for our abilities to listen, to coordinate effectively, and to act decisively on their behalf.

JMWA gains this trust through a no-nonsense pledge at the beginning of service to every new customer — direct contact by a senior company leader who offers himself or herself as the JMWA official for problems that might occur. Depending on the preferences or management methods of the customer, the JMWA senior leader initiates routine follow-up to fulfill this pledge.

In addition to these "leader involvement" practices, JMWA also tackles customer satisfaction using pre-work assessments of workflow processes, identification of customer standards of quality, allocation of resources, and appropriate satisfaction survey instruments. Such steps reflect the

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importance to JMWA leaders of getting fact-based data upon which they can take corrective action.

The final element for securing customer satisfaction is having members who possess integrity, are properly trained, professionally motivated, and empowered by JMWA leaders to do what is right to achieve or recover customer expectations of quality. We meet this standard through a complaint management program with the goal of prompt and effective resolution of complaints, including recovery of customer confidence. This program defines how the company learns from complaints and ensures that leaders and members gain information needed to eliminate the causes of complaints.

Optimized Information and Analysis

Optimized Information and Analysis is the "lifeline" category in JMWA's QA Plan. When it is realized, everyone within the

<p>The value of JMWA's information collection and analysis to support performance excellence, customer satisfaction and marketplace success.</p>
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company has available key information needed to effectively manage the company and/or to drive improvement of JMWA's performance. In simplest terms, this category serves as the brain center for the alignment of JMWA's operations with its strategic direction.

Selection and Use of Information and Data

JMWA leaders recognize the need for selecting the most current and relevant information and data available in support of its "leadership" and "results" triads. As noted earlier, the CMC gathers from many formal and informal sources the long-term, future-focused information about business trends, market opportunities, and customer programs. The annual Business Plan update, for example, reflects action plans derived from our market survey data,

customer workload estimates, acquisition plans, and program appropriations.

On the operational side, VPs and Senior Program Managers need short-term information, such as customer availability of year-end funds, changed priorities, mission impacts, and procurement changes. Due to its geographical spread, JMWA must be timely in both gathering and analyzing information and data used in operational management. The bulk of our current work —indefinite delivery-indefinite quantity contracts — calls for routine, reliable customer information that enables JMWA to maximize the contract opportunity.

Selection and Use of Comparative Information and Data

Knowing key aspects of competitors and their business practices is important to JMWA. Such information because it helps us make competitive and benchmark comparisons. Relevant aspects of this information will be incorporated in updates to JMWA's business plan. Benchmarking information may also support the company's business analysis and decisions relating to core services, strategic alliances, and/or our own outsourcing needs.

Analysis and Review of Company Performance

This category addresses JMWA's analysis of its own performance — the principal basis for guiding our own process management toward key business results. Under the "leadership triad," JMWA senior leaders need to know if and how the strategic planning (and resultant action plans) is achieving the desired ends. Several techniques are currently in use to provide data upon which process change and resource allocation decisions can be made.

Under the "results triad," JMWA's information and analysis needs revolve around key contract-related data. The CFO and COO determine the most effective financial data selection and portrayal. Analysis of such information usually provides a sound basis for new actions or adjusted priorities. We seek the clearest

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understanding of cause/effect connections among our processes and between processes and business results. Process actions usually have resource implications; results may have many cost and revenue implications as well. Given that resources for improvement are limited, and cause/effect connections are often unclear, JMWA seeks a sound analytical basis for decision-making.

A close connection between analysis and performance review helps JMWA ensure direct relevancy to decision making. Therefore, JMWA is moving more towards an integrated system, built around financial and non-financial information and data from all parts of the company, which are aggregated and analyzed to assess overall company performance. The goal is a system by which analysis covers our four key aspects of performance — customer-related, operational, competitive, and financial/market.

High Performing Human Resources

High Performing Human Resources is the location within JMWA's QA Plan for all key human resource practices — those directed toward creating a high performance workforce and toward developing our members in ways that enable them and the

The success of all JMWA's efforts to realize the full potential of its work force; to create a high performance organization.

company to adapt to change. It also addresses human resource development and management needs in an integrated way, aligned with JMWA's strategic directions. To ensure the basic alignment of human resource management with JMWA strategy, this category also makes human resource planning an essential part of our efforts in the Integrated Strategic Planning category.

Work Systems

This item addresses how JMWA's work and job design, compensation, and recognition approaches enable and encourage all members to contribute effectively. It is concerned not only with current and near-term performance objectives, but also with individual and organizational learning — enabling the company to effectively adapt to change.

The basic aim of JMWA's work systems design is to enable its members to exercise discretion and decision making, leading to flexibility, innovation, knowledge and skill sharing, along with rapid response to the changing requirements of the marketplace. Some of our approaches to create flexibility in work and job design include simplification of job classifications, cross training, job rotation, and changes in work layout and work locations. The company also implements new technology and maximum information flow to support local decision-making.

We pursue opportunities with customers to support flexible work organizations that can enhance high performance. We further "partner" with customers when work systems or procedures require exceptional teamwork and information sharing. All JMWA's leaders support and facilitate effective communication across functions and work units to keep a focus on customer requirements. A benefit of this approach is creation of an environment of encouragement, trust, and mutual commitment. In some cases, work teams may involve members in different locations linked via computers or conferencing technology.

JMWA recognizes the importance of aligning incentives with achievement of company objectives. JMWA leaders seek consistency between our compensation and recognition system and its work structures and processes. Annual salary reviews, on-the-spot awards, and compensation incentives for marketing support are JMWA policies that reinforce high performance job design, focus on customer satisfaction, and continued learning. JMWA's performance appraisal system, noted previously, affords

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each member input to his or her rating, including discussion of skill building, use of new skills, demonstrations of self-learning, and knowledge sharing. It also takes into account linkages to customer retention or other performance objectives.

Member Education, Training, and Development

This section addresses JMWA's workforce development via education, training, and on-the-job reinforcement of knowledge and skills. This development is intended to meet the ongoing needs of members and a high performing company.

As a general policy, JMWA supports both leadership and professional development opportunities for members who show motivation and potential. We are fortunate in that many of our customers often provide such opportunities to supporting JMWA personnel when the knowledge and/or skills are needed to meet the customer's overall objectives.

Depending upon the nature of JMWA's work and the members' responsibilities and stage of development, education and training needs vary greatly. Examples can include leadership skills, teamwork, communications, problem solving, safety, interpreting and using data, quality control techniques, process analysis, process simplification, waste reduction, cycle time reduction, error proofing, and hazard communication.

Members who further develop their leadership or professional and technical skills clearly increase JMWA's overall corporate capability. Members afforded training or education opportunities are usually expected to prepare a report for general distribution within JMWA. Not only does this serve as an incentive for other members to pursue such growth, but it also strengthens JMWA as a "learning organization." The report may help other members in similar work situations to benefit directly from new knowledge. In a broader context, this practice can elevate the knowledge base and professional range of all JMWA members.

Continuous improvement and quality performance are expectations for all education and training. JMWA leaders and members alike share the responsibility to evaluate the effectiveness of such opportunities. Evaluation will address factors such as the effectiveness of education or training delivery, impact on work unit and company performance, costs of delivery alternatives, and benefit/cost considerations.

Member Well-Being and Satisfaction

Company leaders know that the work environment, the work climate, and how they are tailored to support the well-being, satisfaction, and motivation of all members directly affect quality and performance excellence.

JMWA leaders ensure company facilities present a safe and healthful work environment. When new work opportunities require establishment of JMWA offices, the same ethic governs our planning and acquisition. In cases where JMWA members support a customer onsite at his facilities, our leaders coordinate with the customer for comparable standards.

Senior leaders seek to enhance member well-being, satisfaction, and motivation through a holistic view of members as key stakeholders in the company. As such, senior leaders, managers, and supervisors have a specific responsibility to encourage members, and foster good communication with and between them. The CMC, President and CEO frequently reexamine member benefits programs (e.g., 401(k), health plan, life insurance, cafeteria plan, etc.) for adequacy and competitiveness. JMWA growth has also brought more flexibility and options in negotiation of member benefits.

JMWA leaders and supervisors also use a variety of formal and informal techniques to determine member well-being, satisfaction, and motivation. The performance appraisal process elicits specific input from members in these areas. Members often include comments on these topics with the

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transmittal of their monthly progress reports. The "open door" nature of JMWA's e-mail system affords an unfiltered path for members to convey issues to senior leaders directly.

When making on-site visits to field members, JMWA leaders use group lunches and one-on-one interviews as "sensing sessions" to assess morale and satisfaction levels. Finally, exit interviews of departing members by supervisors is another forum for assessing JMWA's leadership climate and other indicators of well-being, satisfaction, and areas for improvement.

Process Management Excellence

Process Management Excellence is JMWA's focal point within the QA Plan for all key work processes. Built into this category are the central requirements for efficient and effective process management — effective design, a prevention orientation, linkage to suppliers and partners, operational performance, cycle time, customer communications, problem recovery mechanisms, evaluation and continuous improvement.

The effectiveness of JMWA's systems and processes for assuring the quality of products and services.

Increasingly important to JMWA in all aspects of process management is flexibility. In simplest terms, flexibility means the company's ability to adapt quickly and effectively to changing requirements. Depending on the core service area and market, flexibility might mean rapid changeover from one service to another, rapid response to changing demands, or the ability to produce a wide range of customized services. Flexibility may also mean that JMWA consider outsourcing non-core functions, making agreements with key suppliers, or making novel partnering arrangements.

Management of Product and Service Processes

This category represents the "nuts and bolts" of achieving quality and performance excellence at the cutting edge with customers. It explains how JMWA designs, introduces, produces, delivers, and improves its products and services. It also describes how JMWA coordinates with its customers, starting early in the product and service design phase. This stage offers JMWA a perfect time to formally or informally initiate partnering with the customer and other key stakeholders. The partnering goal is to modify or redesign any process (JMWA's or the customer's) that hinders quality for the purpose of achieving mutually beneficial results.

Assembling information on the design of products, services, and their delivery processes is our first task in this approach. It requires that JMWA examine four aspects of design:

- how changing customer and market requirements and technology are incorporated into product and service designs;
- how production/delivery processes are designed to meet customer, quality, and operational performance requirements;
- how design and production /delivery processes are coordinated to ensure trouble-free and timely introduction and delivery of products and services; and
- how design processes are evaluated and improved to achieve better performance.

The second task in this area calls for information on the management and improvement of our key delivery processes. This must include description of the key processes and their specific requirements, and how performance relative to these requirements is determined and maintained. JMWA selects the critical points in processes for measurement, observation, or interaction with the customer. The intent is that these activities occur at the earliest points possible in processes, to minimize problems resulting from deviations in expected performance. When deviations occur, JMWA's recovery mechanism

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corrects the process to its design performance. Proper correction involves changes at the source (root cause) of the deviation and should prevent recurrence of the problem.

Management of processes also requires we collect and share information on how JMWA improves processes to gain better performance. Better performance means not only better quality from our customers' viewpoint, but also better financial and operational performance — such as productivity — from JMWA's perspective. In our pursuit of process improvement, the company considers several approaches:

- sharing successful strategies across the company;
- process analysis and research (e.g., process mapping, optimization experiments, and error proofing);
- research and development results;
- benchmarking;
- use of alternative technology; and
- seeking information from customers of the processes — within and outside the company.

JMWA also uses approaches that depend on financial data to evaluate alternatives and set priorities. Together, all JMWA's approaches offer a wide range of possibilities, including complete redesign (“reengineering”) of processes.

Management of Support Processes

This section addresses how JMWA designs, implements, manages, and improves its support processes. Support processes are those that support JMWA's product and/or service delivery, but are not usually designed in detail with the products and services themselves, because their requirements usually do not depend a great deal upon product and service characteristics. Support process design requirements mostly depend on internal requirements, and must be coordinated and integrated to ensure efficient and effective performance. JMWA's support processes include finance and accounting, automation and applications software, marketing, public relations, supplies,

contract administration, information services, office management, personnel,

JMWA's performance results, trends and comparison to competitors in key business areas: customer satisfaction, financial and marketplace, human resources, suppliers and partners, and operations.

legal services, research and development, and other administrative services.

JMWA continues to refine or develop policies and procedures for its key support processes. The CMC regularly assesses the effectiveness of these processes and their key standards. JMWA growth and business line expansion stimulate this review to ensure JMWA's support processes bolster performance excellence and quality.

We use some of the same approaches to analyze and improve JMWA's support processes as the company used for its product and service processes. This will most often involve one or more of the following: (1) process analysis and research; (2) benchmarking; (3) use of alternative technology; and (4) information from internal or external customers of the processes.

Management of Supplier and Partnering Processes

This final area addresses JMWA's need to design, implement, manage, and improve its supplier and partner processes and relationships. It also addresses our supplier and partner performance management and improvement. The term “supplier” refers to other companies and to other units of the parent company that provide us goods and services.

Use of goods and services may occur at any stage in the design, delivery, and use of JMWA's products and services. Thus, suppliers and partners include businesses such as distributors, dealers, warranty services, transportation, contractors and franchises, as well as those that provide

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materials and components. Our suppliers also include service suppliers, such as health care, training, and website hosting providers.

JMWA emphasizes the relationships that it builds with key and preferred suppliers, including establishing partnering relationships. For JMWA, these suppliers and partners are an increasingly important part of us achieving not only high performance and lower-cost objectives, but also strategic objectives. For example, they might provide unique telecommunications and information management.

For each key supplier and partner, JMWA determines the performance requirements for quality. These requirements are the principal factors involved in our purchases, e.g., quality, delivery, and price. The company, generally through its functional department chiefs, sets up processes to determine if requirements are met. This might include audits, process reviews, receiving inspection, certification, testing, and rating systems.

In agreement with our suppliers and partners, JMWA documents the actions and plans necessary for them to contribute to achieving our company's overall performance goals. Such actions and plans include one or more of the following: improving our own procurement and supplier management processes (e.g., seeking feedback from suppliers and internal customers), joint planning, use of benchmarking and comparative information, customer-supplier teams, training, long-term agreements, incentives, and recognition. JMWA continually considers changes in supplier selection, especially where economies of scale can be achieved with no reduction in quality.

High Quality Business Results

The High Quality Business Results category gives JMWA a **results** focus that encompasses the customer's evaluation of the company's products and services, the company's overall financial and market

performance, and the results of all key processes and process improvement activities. Through this focus, the QA Plan's dual purposes — superior value of offerings as viewed by our customers and the marketplace, and superior company performance reflected in operational and financial indicators — are maintained. Such results thus provide JMWA senior leaders "real-time" information to assess and improve processes, products, and services, aligned with our overall business strategy.

Customer Satisfaction Results

This section addresses JMWA's key customer-related results — customer satisfaction, customer dissatisfaction, and customer satisfaction relative to competitors. It explains how leaders select and use all relevant data and information to determine JMWA's performance as viewed by the customer. Relevant data and information include: customer satisfaction and dissatisfaction; retention, gains, and losses of customers and customer contracts; customer complaints; customer-perceived value based on quality and price; and competitive awards, ratings, and recognition from customers and independent organizations.

Financial and Market Results

Factors that best reflect JMWA's financial and marketplace performance comprise this area. Here JMWA takes and acts upon key financial and market measures regularly tracked by senior leaders to gauge overall company performance. Measures of financial performance include return on equity, return on investment, operating margins, pre-tax profit margin, and profit forecast reliability. Marketplace performance includes business growth, new services and geographic markets entered, and percent of new contracts or customers. Comparative data may include industry best, best competitor, industry average, and relevant benchmarks.

Human Resources Results

JMWA uses this section to address its human resource results — those relating to member well-being, satisfaction, develop-

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ment, motivation, work system performance, and effectiveness. Results reported include generic and company-specific factors. Generic factors include absenteeism, turnover, safety, and satisfaction. Company-specific factors include changes in labor category (job title), job rotation, work layout, training and professional development.

This section also calls for comparative information so JMWA's results can be evaluated against competitors or other external measures of performance. For some measures, such as absenteeism and turnover, the company makes local or regional comparisons, as appropriate.

Supplier and Partner Results

JMWA uses this category to look at current levels and trends in key measures or indicators of our supplier and partner's performance. The focus here is on the most critical requirements from JMWA's viewpoint — the “buyer” of the products and services. Reported data reflects results by whatever means they occur — via supplier and partner improvements or through changing to better performing suppliers and partners.

Data reported also reflects how suppliers and partners have contributed to JMWA's performance goals. Appropriate results can include cost savings; reductions in rework; and cycle time or productivity enhancements. JMWA leaders also seek comparative information so they can meaningfully evaluate results reported against competitors or other relevant external measures.

Company-Specific Results

This section offers JMWA leaders the freedom to address key performance results, not covered in other sections, that contribute significantly to company goals — customer satisfaction, product and service quality, operational effectiveness, and financial/marketplace performance. This helps leaders develop and use any unique measures to track performance in areas important to the company.

Results must reflect key product, service, and process performance measures, including those that serve as predictors of customer satisfaction. Whatever the measures chosen by JMWA leaders under this category, improvements in them should show a positive correlation with our customer and marketplace improvement indicators. Correlation between performance and customer indicators is a critical JMWA management tool — a device for defining and focusing on performance excellence and for identifying what distinguishes JMWA from our competitors. Correlation may also reveal emerging or changing market segments, changing priority of requirements, or even the potential obsolescence of products or services.

Measures or indicators of JMWA's operational effectiveness would include such items as: repeat customers; increased contract size; timely renewal of contracts or delivery orders, cycle time response, performance recognition or awards from the customer; and measures of JMWA strategic goal achievement.

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GLOSSARY OF KEY TERMS

This Glossary of Key Terms defines and briefly describes terms that are important to implementation of quality assurance and performance excellence in JMWA.

Action Plans

Action plans refer to principal company-level "drivers," derived from short- and long-term strategic planning. Action plans enable JMWA to achieve what it must do well for its strategies to succeed. Developing action plans is the critical stage in planning; for it turns general strategies and goals into specifics so effective company-wide understanding and deployment become possible. Deployment of action plans requires analysis of JMWA resource needs and creation of aligned measures for all work groups and members.

An example of an action plan element for JMWA might be to select and field a more robust cost accounting system. Deployment should entail design of efficient processes, analysis of resource and asset use, and creation of related measures of resource and asset productivity, aligned for the company as a whole. It might also involve use of a cost-accounting system that provides activity-level cost information to support day-to-day work. Unit and/or team training should include priority setting based upon costs and benefits. Company-level analysis and review should emphasize overall productivity growth. Ongoing competitive analysis and planning should remain sensitive to technological and other changes that might greatly reduce operating costs for the company or its competitors.

Alignment

Alignment refers to consistency of plans, processes, actions, information, and decisions among JMWA offices in support of key company-wide goals.

Effective alignment requires common understanding of purposes and goals. It uses complementary measures and

information to enable planning, tracking, analysis, and improvement at the corporate level, the key process level and the work group or member level.

Cycle Time

Cycle time refers to time performance – the time required to fulfill commitments or to complete tasks. Time measurements play a major role in JMWA's quality goals because of the great importance of time performance to improving competitiveness.

High Performance Work

High performance work refers to work approaches that *systematically* pursue ever higher levels of overall company and member performance, including quality, productivity, and time performance. Approaches to high performance work vary in form, function, and incentive systems. Effective approaches may generally include: cooperation between management and members such as self-directed teams; member input to planning; individual or organizational skill building and learning; flexibility in job design and work assignments; a "flattened" organizational structure; and effective use of performance measures. Also, high performance work approaches usually seek to align the design of organizations, work, jobs, member development, and incentives.

Leadership System

Leadership system refers to how leadership is exercised, formally and informally, throughout JMWA – the basis for and the way that key decisions are made, communicated, and carried out. It includes our structures and mechanisms for decision-making, selection and development of leaders and managers, and reinforcing values, practices, and behaviors. The thrust of JMWA's leadership system is to create clear values for the capabilities and requirements of members and to set high expectations for performance and

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performance improvement. It seeks to build loyalty and teamwork based upon our values and the pursuit of shared purposes. It also encourages initiative and risk-taking, and avoids chains of command that require long decision paths.

Measures and Indicators

Measures and indicators refer to numerical information that quantifies input, output, and performance dimensions of JMWA's processes, products, services, and the overall company business. Our measures and indicators may be simple (derived from one measurement) or composite.

Performance

Performance refers to output results information obtained from our processes, products, and services that permit evaluation and comparison relative to goals, standards, past results, and to other organizations. Performance might be expressed in non-financial and financial terms.

Three types of performance are addressed in this QA Plan: (1) operational, including product and service quality; (2) customer-related; and (3) financial and marketplace.

Operational performance refers to performance relative to effectiveness and efficiency measures and indicators. Examples include cycle time, productivity, waste reduction, and regulatory compliance. Operational performance might be measured at the work unit level, the key process level, and the company level.

Product and service quality refers to operational performance relative to measures and indicators of product and service requirements, derived from customer preference information. Examples include reliability, on-time delivery, defect levels, and service response time. Product and service quality performance generally relates to the company as a whole.

Customer-related performance refers to performance relative to measures and indicators of customers' perceptions, reactions, and behaviors. Examples include customer retention, complaints, and customer survey results. Customer-related performance generally relates to the company as a whole.

Financial and marketplace performance refers to performance using measures of cost and revenue, including asset utilization, asset growth, value added per member, debt to equity ratio, and market share. Financial measures are generally tracked throughout the company and also are aggregated to give company-level, composite measures of performance. Examples include returns on investments, returns on assets, operating margins, and other profitability and liquidity measures.

Process

Process refers to linked activities with the purpose of producing a product or service for a customer (user) within or outside the company. Generally, processes involve combinations of people, machines, tools, techniques, and materials in a systematic series of steps or actions. In some situations, processes might require adherence to a specific sequence of steps, with documentation (sometimes formal) of procedures and requirements, including well-defined measurement and control steps.

In many service situations, particularly when customers are directly involved in the service, process is used in a more general way - to spell out what must be done, possibly including a preferred or expected sequence. If a sequence is critical, the service needs to include information for customers to help them understand and follow the sequence. Service processes involving customers also require guidance to the providers on handling contingencies related to customers' likely or possible actions or behaviors.

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In our conceptual and knowledge work such as strategic planning, research, development, and analysis, process does not necessarily imply formal sequences or steps. Rather, process implies general understandings regarding competent performance such as timing, options to be included, evaluation, and reporting. Sequences might arise as part of these understandings.

Productivity

Productivity refers to measures of efficiency of the use of resources. Although the term is often applied to single factors such as staffing (labor productivity), machines, materials, energy, and capital, the productivity concept applies as well to the total resources used in producing outputs. Overall productivity — sometimes called total factor productivity — is determined by combining the productivity of the different resources used for an output. The combination usually requires taking a weighted average of the different single factor productivity measures, where the weights typically reflect costs of the resources. The use of an aggregate measure of overall productivity allows a determination of whether or not the net effect of overall changes in a process — possibly involving resource tradeoffs — is beneficial.

Effective approaches to performance management require understanding and measuring single factor and overall productivity, particularly in complex cases when there are a variety of costs and potential benefits.