Next Generation Business Process
Analysis & Design Solutions
For the 21st Century

September 2001
Foreword

What is the value of Business Process Knowledge?

Every enterprise runs on business processes, no matter how large or small. These processes define your business and determine how you deliver value to your customers.

Business processes are the biggest hidden assets in your enterprise. They exist, implicit in your people, your systems, and your interactions with customers, suppliers, prospects, and distributors. They are the blueprints of your organization, the corporate “DNA” that will directly contribute to the success or failure of the enterprise.

Business processes may not show up directly on your balance sheet, but their results do.

Lost revenue from capacity constraints and higher manufacturing costs impact profits. Poor customer service impacts Accounts Receivables. Inefficient manufacturing processes drive up inventory levels and related carrying costs.

The value of knowing your Business Processes is as indisputable as the cost of not knowing.

What is the value of Discovering your implicit business processes and making them explicit? What is the value of Understanding how your organization really works and being able to ACT proactively to optimize Business processes, eliminate bottlenecks, reduce cycle times; design new process and share them across the extended enterprise?

Our mission is to enable you to harness business process knowledge to power the efficient, agile, collaborative enterprise.

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1. Intersection of Business and Technology

Most companies do not consciously understand the processes that define them. They lack a detailed and comprehensive blueprint of their operations, the workflow among departments, systems, employees, divisions, vendors and clients.

Without this critical Business Process Knowledge:

- Operational efficiency initiatives take longer, cost more, and yield inconsistent results.
- Reaction quickly to new opportunities or sudden threats is sluggish.
- Effective collaboration with customers, suppliers and partners becomes a major challenge.
- Alignment and implementation of IT initiatives to support business goals is irregular.

These companies become brittle and their ability to react and to improve operations suffers. This loss of agility has claimed more than one enterprise in this competitive marketplace.

Business Process Analysis & Design (BPA) is not a new discipline or function. The goal of the business analyst has always been to uncover and understand the complex interrelationships of operations, the workflow among departments, systems, employees, divisions, vendors and clients. To create a baseline of knowledge that can be used to effectively improve operational efficiency. With the advent of the Information Age, BPA has become the critical bridge between business process and the deployment of information technology.

Business has looked to information technology to improve operational efficiency. The fact is, however, that most information-technology projects fail. According to a report by the Standish Group, 31% of all software projects are canceled before completed, 53% of projects cost almost double, and in large companies, less than 10% of these projects are completed on time and on budget. This is largely due to inadequate planning and inaccurate or out of date information. Lack of proper planning and incorrect information inevitably cost enterprises hundreds of thousands of dollars in rework, unfinished projects, and additional person-hours.

The root cause of this phenomenon is that business analysts and IT professionals speak different languages and operate at opposite levels. Business analysts focus on the high-level aspects of processes (people, systems, and machinery) whereas IT professionals need precision on the details (system requirements, business objects, interfaces, projected volumes, etc). The resulting communication gap leads to incomplete and inaccurate systems requirements, and ultimately to projects that are cancelled, delayed or miss the mark. This problem has been with us since the dawn of the Information Age.

About 10% of a company’s IT department contributes nothing of value to a business annually. That is because these employees are working on projects that ultimately fail or are canceled.

-TechRepublic, Inc.
1.1. The Next Generation of Business Process Analysis & Design - Knowledge Capture and Collaboration

Understanding the intersection of business and technology has until today defied automation. Drawing tools and models help to understand small subsets of the process picture, however the great gains in Software engineering demand a more comprehensive, dynamic approach to BPA, one centered around knowledge capture and collaboration – the next generation of Business Process & Analysis. The technology has advanced and there is a new approach, a better, faster, and less expensive way to capture your enterprise’s process knowledge and close the gap between business analysis and project deliverables. This is the ProActivity solution.

ProActivity is a leading provider of next-generation Business Process Analysis and Design solutions for the Global 2000. ProActivity develops, sells and supports the first and only scalable software platform and related products for capturing, analyzing, optimizing, and sharing business process knowledge across the enterprise. The heart of ProActivity is the exclusive Process Knowledge Base™, which enables customers to improve operational effectiveness, accelerate IT initiatives, and create collaborative processes that reach beyond the enterprise.

“"The popularity of e-business in the mid-to-late-1990s has made many companies realize that most of their processes are not well documented, and quite frankly, are outdated and not optimized for speed and responsiveness". Business Process Management (BPM) Adapting to Changes in Business Strategy AMR Research April 2001

2. Conventional Approaches to Business Process Analysis

Most companies approach business processes with pad and pencil (or whiteboard and marker), capturing the process details in a workshop setting. They then transcribe these processes into a drawing tool, which may be part of a commercial modeling product. Drawing tools can provide a high level snapshot of what the team captured on the board, however they cannot provide a realistic, multi-faceted view of an enterprise’s operations with all the richness and complexity of real business processes. This labor-intensive, static approach has severe limitations for understanding, analyzing and designing business processes. Drawing tools can rarely provide a truly complete or satisfactory solution.

2.1. Model Accuracy

Conventional modeling tools are not designed to link and rationalize a collection of discrete models to create an enterprise wide picture. The information in these models is not collected and managed in such a way as to be reusable or viewed in a multidimensional manner. In short, the model paradigm is a “point” solution with limited usefulness in understanding the interrelationships of people, process, and systems across the extended enterprise, especially when you do not know all the questions that will be asked while you are capturing relevant information.
2.2. **Scalability**

Point solutions represent a snapshot of the bigger picture. Today’s demand for Business Process Analysis requires a broader scope. Business operations can easily involve dozens of processes with hundred activities and data items, and it is impossible to scale to an enterprise level with a tool designed to be used by a single user, with data stored in individual drawing and modeling files. These models capture isolated, static information that is often out of date as soon as it’s captured. Changing or re-designing processes requires creating new drawings from scratch. What is needed is one central, scalable knowledge base where authorized users can create and access process knowledge simultaneously. Unlike a repository of models and drawing files, a knowledge base can be updated, analyzed, extended, and shared.

2.3. **Collaboration and Iteration**

Visual tools do not support knowledge collaboration. Knowledge is dispersed throughout the organization in different forms, at different levels of detail, based on varying frames of reference. There is no standard for capturing process knowledge, and the capability of these tools is limited to superficial, static representations of the process. The ability to analyze process data from several perspectives is a key requirement of Business Process Analysis, and such tools are inherently limited in the ways in which they render the information.

A three-ring binder of diagrams cannot be incrementally updated. Because the information is captured visually rather than logically, making changes often requires a new consulting project. The same information is often captured and recaptured every time a process changes. This wastes valuable time and undermines business agility. What is needed is a truly iterative approach to change.

2.4. **The ProActivity Difference – Dynamic, Reusable Views vs. Static Pictures**

ProActivity’s unique approach to knowledge capture and collaboration enables accurate, iterative and relevant process understanding. Information is collected and stored in an intelligent, central, dynamic knowledge base, then validated and normalized so both IT professionals and business analysts share a common frame of reference. Graphic representations are automatically derived from the knowledge base, is accessible to multiple users, can be reused repeatedly, and viewed in a multitude of ways. This provides a foundation for collaborative analysis, design and continuous improvement that no tool can match.
3. ProActivity – Next generation Business Process Analysis and Design
For Global 2000 companies looking to improve productivity and profitability through business process analysis and design, ProActivity is a collaborative platform for capturing, analyzing, designing, optimizing and sharing business processes from end-to-end across the extended enterprise. With ProActivity you can manage business processes as the valuable assets they are, through interactive, comprehensive and dynamic blueprints of your business.

ProActivity is the first and only solution that:

- Captures, validates and creates detailed “As Is” business processes in a central Process Knowledge Base™.
- Incorporates patented discovery and validation technology.
- Automatically generates dynamic, multidimensional process graphics.
- Contains powerful metrics and analytics.
- Creates a dynamic, strategic asset of explicit processes that can be reused and shared across the extended enterprise.

Dynamic process design with ProActivity enhances operational efficiency, accelerates IT initiatives, and creates collaborative processes that reach beyond the enterprise. ProActivity is a strategic asset featuring a strong Return on Investment (ROI) that will save you thousands of hours and related costs, speeding up the net time to value for your efforts.

Unlike desktop-based drawing and modeling tools that are designed for individual users, ProActivity's Process Knowledge Base™ is implemented on a central, large-scale non-proprietary database, enabling users across the enterprise to enter, validate and share information. Built to accommodate large-scale deployment and usage, ProActivity's central store of business process knowledge is gathered through structured interviews, and is rigorously validated. Using the platform's process analytics and design capabilities, companies harness their business process knowledge to become efficient, agile and collaborative enterprises.

3.1. Solutions & Initiatives
Our customers deploy ProActivity to support strategic initiatives such as:

- Process improvement/design/redesign - Companies looking to improve productivity and profitability through business process analysis and design. (e.g. Six Sigma, Lean Manufacturing and Straight Through Processing)
- IT Enterprise Application Implementation and

“ProActivity is an excellent platform for Six Sigma because it gives us both process and data flow understanding simultaneously, and shows the human element as well. I am passionate about this application because of its potential to help us finally understand the handoffs in our processes.”

Master Black Belt
Fortune 50 Corporation
integration - Companies implementing processes and integrate business applications, such as ERP, CRM, and EAI.

- Collaborative processes beyond the enterprise - Companies looking to achieve operational efficiencies within their value chains (B2B exchanges, SCM, Partnerships, etc.).

3.2. Customers and Partners
All enterprises that seek to align, coordinate and maximize the efficiency of their different functions will benefit by using ProActivity. Those who understand and recognize the importance of managing the information flow in an organization also know that having a complete view and an ability to see how changes in one department affect others is critical to becoming an agile, collaborative and knowledge-based enterprise. Consulting organizations, systems integrators, and process outsourcing firms can digitize and package their value – methodologies, best practices, operational models, data flows, functional specifications, etc. - within the ProActivity platform and use the results as a delivery mechanism to their clients.

4. Return on Investment
Strong ROI means significant cost savings, improved cycle time, less work and faster results. ProActivity pays for itself with the first project. These are real savings: save money on labor, save money on time. Using dependable, scalable and reusable data, our customers report that on average they can work two to four times faster, for half the cost of conventional alternatives, and create higher quality deliverables.

Projects are rarely completed at the projected time and at the projected cost. More often than not they go over budget, over deadline, and experience several changes in the middle of the project. Without precise, detailed information from which to develop software solutions, projects are doomed to failure or costly hours of rework. The intangible costs of inaccurate, incomplete process knowledge can include “lack of features that could have been delivered had the project’s resources not been devoted to rework, loss of confidence on the part of customers, and accompanying lost and unrecoverable market share, revenue and profit”.¹

Investing in the ProActivity solution will pay for itself repeatedly with the return of accurate, validated process knowledge that is critical to project success.

## 4.1. Snapshot: A Case Study

The Process Engineering Manager of one Fortune 100 Company in the Midwest says ProActivity helps ease the pain of linking together processes in his company. "There can be instances where there will be three organizations working on processes and functionality pouring into five projects. That leads to both gaps and overlap," he says. The ProActivity software lets his team focus on the business functions and how they flow through the process. It also finds the "white space" where they're not connecting now. "ProActivity lets us define deliverables broadly and immediately drop down into the activities [to see what's underneath]. With the database Wizards, we were able to quickly fan out one on one to all the individuals, gather results and then clarify them."

This first project would have cost the Company an estimated $128,000 dollars and been completed in a full 40 weeks. ProActivity cut that time to 8.5 weeks, and after the cost of the platform, returned a savings of $32,000. That’s a 46% ROI and a time savings of 31.5 weeks from the first project.

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<tr>
<th>Time (weeks)</th>
<th>Cost (000s)</th>
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<tr>
<td>15</td>
<td>100</td>
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<td>30</td>
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<td>45</td>
<td>250</td>
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<tr>
<th>Manual Effort</th>
<th>Cost of ProActivity PRO</th>
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<tr>
<td>M1</td>
<td>173</td>
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<table>
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<tr>
<th>Time Savings</th>
<th>Cost Savings</th>
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<tbody>
<tr>
<td>31.5 weeks</td>
<td>$32,000</td>
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</table>

After two similar projects, there was a savings increase of $133,000 and 63 weeks. Because much of the data was already entered in the Process Knowledge Base™, very little time was spent capturing the data for the project. ROI increased to 193% after only two projects.

## 4.2. Time Compression

As the Process Knowledge Base™ incorporates more processes and information, return on investment (ROI) increases. Many processes within an organization use the same data. Once entered into the repository, that data is available for reuse across the enterprise, which means steadily increasing efficiency with each new project. As you undertake additional initiatives, add only the additional processes required. This dramatically speeds up your initiatives and saves you even more on labor and related costs.
5. Product Overview
ProActivity empowers organizations to adapt continually to an ever-changing world. Our unique platform approach to Business Process Knowledge enables our customers to improve their operational efficiency, accelerate IT initiatives, and create collaborative processes that reach beyond the enterprise.

ProActivity’s process lifecycle of Discover: Understand: Act provides greater understanding of and precision to your business processes. ProActivity lets you analyze, customize and design your business processes by providing an interactive, comprehensive and scalable Process Knowledge Base™ of your business, making your hidden processes explicit. Once you have discovered this business knowledge you can effectively analyze and understand how your enterprise truly works. Then act on what you’ve discovered to plan IT initiatives and other projects to become an efficient, agile and collaborative enterprise.

5.1. Business Process Defined
A business process is “a specific ordering of work activities across time and place, with a beginning, an end, and clearly identified inputs and outputs. A process is a structure of action.”

5.2. Business Architecture
The ProActivity Process Knowledge Base™ is organized into a hierarchical structure that provides a clear business context for understanding business processes. This hierarchy mirrors the enterprise to reflect the various business functions, each of which is responsible for producing deliverables. Each deliverable is the result of one or more processes. These processes may be broken down into sub processes, which are broken down into activities. The activity is the atomic level of the ProActivity Process Knowledge Base. Activities are connected by inputs and outputs, and are performed by resources (any combination of people, tools, systems, or organizations).

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5.3. Activities & Business Objects
Each activity is performed by a resource, utilizes inputs, and produces outputs. You specify each activity that a user or information system performs, the data required to perform that activity and the data it produces. ProActivity helps you compile this information across the full range of business processes, ProActivity detailed information IT professionals need to design, develop, and deploy the new system. Each input and output can contain a business object, which is a logical container for business data, organized into fields. Examples of business objects include customers, purchase orders, and invoices. Business objects can be public, available to everyone in the enterprise for use, or private and available only for a specific project. As a process unfolds, the state of business objects change. Each activity adds more detail to the business object. Capturing data at the field level is critically important for IT implementation and is unique to ProActivity.

6. How ProActivity Works
6.1. The Process Knowledge Base™
The Process Knowledge Base™ is a scalable, dynamic, database of the enterprise’s business processes that serves as the heart of the ProActivity solution. Unlike modeling tools, the knowledge base stores information at the logical level. By capturing detailed data on entities and relationships, ProActivity is able to treat processes as data. This is key to ProActivity’s powerful analytics and visualization capabilities. The knowledge base manages complexity by breaking processes down to their most basic components: resources, activities, their data elements and flows, decision points, organizational touch points, costing data, timing data, relationships with other processes (both human and automated). In addition, you can define custom metrics that reflect the unique requirements of the business. Once entered into the repository, process knowledge can be changed, shared and reused again and again. New projects become progressively easier and faster to complete, increasing your ROI with each use.
6.2. Dynamic Views

Unlike existing approaches that use static drawings, ProActivity dynamically generates process diagrams. You can create unlimited multidimensional diagrams representing the sequence of activities and information flows. These diagrams can be organized into different formats and presented at different levels of detail. The flexibility and comprehensiveness of ProActivity enables you to focus on a critical aspect of a project as well as analyze the enterprise as a whole, without having to re-enter information.

The great weakness of conventional approaches to business knowledge capture is their inability to change. Process diagrams in ProActivity are generated by the system, not drawn by human beings. Once information is captured in the Process Knowledge Base, it can be easily updated as business requirements change. A new activity can be inserted, a resource can be changed, and fields of Business Objects can added, modified, or removed in a matter of minutes. These changes are reflected instantaneously in all subsequent process diagrams and process analytics.

6.3. Enterprise Process Reusability

To facilitate collaboration and innovation, process knowledge must be shared across boundaries. ProActivity is designed to accommodate multiple projects, sharing and reusing process information. Business objects, analytics, and diagrams can span multiple business units and projects. In this way, you can begin to break down the boundaries between "stovepipes" to unify your extended enterprise.
6.4. Customization

Every entity in ProActivity, from enterprise to activity to business object, can be customized and enriched with User Defined Attributes, Notes and Attachments. Each adds new levels of value to the captured knowledge, enabling more effective process design and management. By capturing the unique requirements of your business, you can analyze the controlling variables of your business processes and improve quality through detailed measurement of activities.

In order to improve processes, it is necessary to define and quantify attributes. ProActivity provides custom metrics or “user defined attributes” (UDA) for this purpose. At each level of the process hierarchy, the user can customize ProActivity to reflect the unique requirements of the business.

In the above screen, user defined attributes are specified for each activity. It allows us to indicate if an activity is performed manually or with automated support.

Notes can be added to each entity to provide additional information. Attachments enable you to incorporate more extensive material to an entity. Any file, including images, video, cams, business rules, training materials and more can be attached to any entity.

6.5. System Resources

ProActivity can generate requirements for information systems and show system interfaces in a resource diagram. Through the use of business objects, ProActivity captures the data requirements for systems at the field level. Moreover, ProActivity identifies the relationship of logical business object fields with

"ProActivity has the potential to help us finally understand all the hand-off and touch points in our business. The past was filled with ‘disconnects’, but now we see both the data flows and the human element.”

Executive, Fortune 50 Company
their physical implementations in enterprise databases and systems. This relationship is critical to system architecture and deployment.

6.6. Role-based Security
Security is critical to ensure the integrity of the data entered into the Process Knowledge Base™. After entering a valid user id and password, a user can perform the basic business functions of discovery, validation, and generating diagrams and analytical reports. The user’s security profile defines the ProActivity entities that the user is allowed to access and change.

ProActivity employs security based on roles. Individual users are assigned to particular roles, and this approach strengthens the comprehension of each process; roles are consistent whereas the individuals who perform them are not. Each entity has an Owner, the role responsible for defining and changing that entity. Users assigned to roles can grant access rights to other individuals.

7. DISCOVER How Your Business Really Works
For many business problems, an accurate understanding of how your organization actually works is the key to designing, implementing and improving new systems or efficiency initiatives. Manually capturing and documenting how your business really works is expensive, time consuming, and often results in incomplete, inconsistent, and inaccurate information that cannot be easily corrected or shared. ProActivity was designed with the complex task of Discovery in mind.

7.1. Data Capture
Discovery proceeds by a series of interviews with Subject Matter Experts (SMEs), individuals responsible for defining process information. Easy-to-use Discovery Wizards guide the interviewer in capturing the process information and then organize the complex functions into manageable sub-processes and activities. This step-by-step approach lets even the inexperienced user capture all the details of a process. ProActivity allows multiple users to work in parallel, entering information about different aspects of a process. In this way a team of users can capture an immense amount of information in a short time period. A rapid decomposition path is also available for an experienced user that bypasses the wizards, dramatically increasing speed. Process Discovery is comprehensive, fast, and simple.
7.2. Automatic Process Validation

Once process information has been entered, ProActivity checks it for consistency and completeness. For example, if one activity produces an output, while another activity consumes the same data as an input, the system will verify that they match. It pinpoints all inconsistencies and errors, and then guides the user in quickly correcting them.

In the screen below we see that there are five places where an input is missing. By double clicking on each row, a screen will open allowing the user to create an input for that particular activity, thereby resolving the inconsistency.

![Validation screenshot]

Validation enables high quality analysis, reducing risk, and users can confidently design complex processes that are complete and accurate. Because the data is valid from the start, you don't waste time correcting errors and inconsistencies in your downstream implementation.

7.3. Batch Input

To support large enterprises with hundreds of business objects, data elements, users or resources, the customer can perform a batch input of data. This saves hundreds of hours of data entry.
8. UNDERSTAND Your Problems and Opportunities

8.1. Process Diagrams

Now that the underlying process information has been captured and validated, ProActivity can organize and present this information in customizable, multi-dimensional views. Unlike conventional tools, ProActivity is an intelligent platform that generates process diagrams automatically and dynamically. **The user never draws a thing.**

The user indicates the type of diagram required, the level of detail, and the scope. When the user requests a process diagram, ProActivity then generates a visual representation of the process, showing the sequence of activities and the information flows using standard symbols. Hundreds of different views can be generated, each revealing a different aspect of the processes. The level of detail is controllable, from very high-level to very detailed. The focus can be on activities, resources, or information flow. Diagrams can be subdivided into “swim-lanes” that highlight the functions performed by different organizations or resources.

A segment of a process flow is illustrated in the diagram below. Circles represent inputs and outputs; a red circle indicates a valid input, a gray circle means it is incomplete or missing a source or destination. This error will also be listed in the validation screen. Rectangles represent activities, yellow rectangles being complete with input, output and resource. Diamonds are conditional or branch activities: depending on the condition the process flows to a different destination. Triangles represent ‘XOR’ or ‘either or’, where either input can start the activity.

ProActivity renders a dynamic, multidimensional, active graphical representation of a process from the elements contained in the Process Knowledge Base™. Users click on a graphical element, displaying the element’s detail and relationships with other elements, which can be explored in real-time. Analyzing processes is easy when the information is explicit, defined and digitized.
8.2. Multidimensional Views by Stakeholder
Process diagrams highlight handoffs, activities, touch point diagrams can be organized to meet the needs of different stakeholders. These diagrams can be organized by organization unit, by the type of automation employed, or by roles. Each view shed light on a specific aspect of the process, per sharehol.

8.3. Process Analytics
ProActivity analytical techniques and reporting provide deeper levels of information and insight that span across multiple business processes. Analytics enable users to quickly zero in on activities in the critical path to be improved and understand how to maximize resources and increase efficiency across the enterprise. Users can:
- Create a functional specification for the development of a new information system
- Identify bottlenecks in the process and reduce cycle time
- Define component-level requirements for a new application package
- Map out all system-to-system interactions
- Trace the state changes of Business Objects through all business processes
- Perform impact analysis for proposed system changes

ProActivity includes a built-in reporting engine that gives the user full drag-and-drop control over report generation. The number of such ad hoc reports is virtually limitless. Advanced process analytics also enable you to understand and analyze processes from multiple dimensions and perspectives including Gap Analysis, Critical Path, and Impact Analysis.

8.4. Dynamic Filtering
ProActivity provides extensive filtering capabilities that allow users to suppress information selectively. This enables the user to focus on a particular aspect of the business and to find the answer to specific business questions. For example, if we want to focus on the interactions between the customer and the customer service organization, we can filter out all other aspects. This serves to bring attention to the customer touch points. We can view all the activities involving a particular information system or system component.
9. ACT to Implement, Monitor, & Refine Your Enterprise Blueprint

Once the current state is discovered, gaps, bottlenecks, and opportunities can be identified and a future state can be designed and evaluated. The current state serves as a baseline to measure the impact of new processes, drive efforts for standardization and evaluate proposed process changes and the impact of new business events. This will allow you to:

- Design new processes and measure their potential impact.
- Drive efforts for standardization.
- Respond to business events (Mergers & Acquisitions, expansion, contraction, new markets, products, etc.).
- Identify areas for automation.
- Analyze the impact of proposed changes.

9.1. UML & XML

Once process knowledge is identified and developed, you can apply it to application development, enterprise application integration (EAI), and business-to-business integration (B2Bi) projects. ProActivity offers several techniques for communicating with other systems. For exporting detailed process information to UML, ProActivity has developed the Integration Bridge in conjunction with Meta Integration. This allows for exporting Business Objects, Data Objects, and Business Object Fields into Class Diagrams in Rational Rose. The ProActivity Applications Programming Interface called PAPI, which allows a calling program to request process information from ProActivity, which is returned as XML documents.

“We have determined that we saved 64,000 hours...doing things automatically that we used to do manually. With ProActivity we can see exactly where the savings are, and use that information to plan further process improvements throughout [our company].”

Executive, Fortune 50 Corporation
10. ProActivity Architecture
ProActivity is a patented, scalable solution, written in Java, which builds on standard relational databases.

10.1. Physical Infrastructure
ProActivity is written entirely in Java 2, using the Enterprise Java Beans (EJB) component model. The ProActivity software architecture employs three logical layers: Client, Server and Database. In general, each of these layers runs on a separate hardware platform, as shown below:

10.1.1. User interface
ProActivity employs a rich set of User Interface constructs for displaying the process hierarchy, process diagrams, and for enabling the user to define and change business processes. The ProActivity User Interface is written in Java, using the Java Swing classes.

10.1.2. Application server
All business logic executes on the ProActivity application server, a set of interacting Enterprise Java Beans. The application server implements the discovery, validation, and display functions mentioned above. Creating a separate layer for the business logic offloads the client and provides a means to ensure scalability to the enterprise level.

10.1.3. Database
The Process Knowledge Base is implemented as a set of tables in a relational database management system. Connectivity between the application server and the DBMS is established through JDBC.
Currently ProActivity supports Oracle and Sybase databases. Other database vendors will be added. This ensures that the size of the Process Knowledge Base™ can expand to meet the needs of the full enterprise without reaching limits of the underlying technology.

10.2. Wide Area Connectivity
Many customers access ProActivity over a wide area network, using Metaframe from Citrix to provide remote access:

Users are connected to the network via web browsers. The client software is implemented in the Citrix system, which is co-located with the application server and DBMS. Because only keystrokes and screens are transmitted over the WAN, the performance impact is minimal. In addition, installing client upgrades is vastly simplified, as the client software is installed in only one place—the Citrix server.

11. Conclusion
According to Gartner Group, organizations are beginning to develop “Enterprise Nervous Systems”, an intelligent network that integrates and automates business operations across the enterprise. The scope and depth of business automation will extend beyond the personal computer to the enterprise, tying the individual to the organization, integrating the manual with the automated, reaching beyond the boundaries of the organization to include customers, suppliers, and business partners. Only in this way can breakthrough improvements in productivity be achieved.

“Enterprises should begin to take advantage of explicitly defined processes. By 2005, at least 90 percent of large enterprises will have BPM in their ENS…Enterprises that continue to hard-code all flow control, or insist on manual process steps and do not incorporate BPM’s benefits, will lose out to competitors that adopt BPM”.

Business Process Management: Core to the ENS
Gartner Group 2001
This vision requires the coordinated development and integration of technologies, architectures, and services. It includes middleware, automated process execution, application integration, process monitoring, and sophisticated state management. It also means applying advanced software technology to discover and understand implicit business processes, by making them explicit, in order to take appropriate action. Business Process Analysis (BPA) is the logical starting point for the Enterprise Nervous System.

The ProActivity platform will provide quick ROI on today’s projects, while building a knowledge base that you can continue to use and benefit from over the long term. ProActivity will enable you to Discover your business of today, Understand the path to the future, and Act effectively, in this way you will create the proactive enterprise and will become conscientely good at what you do.
If you have any questions or comments regarding this paper, please email us at:

info@proactivityinc.com

ProActivity, Inc.
181 Wells Avenue
Newton, MA 02459
www.proactivityinc.com
tel: 617-332-0095  fax: 617-332-0295
info@proactivityinc.com
Doc 0109-B