Designed from the ground up to be **embedded**

Process Modelling  
Process Automation  
Business Activity Monitoring

**Embed Business Process Management in Your Application**

The Cardiff LiquidBPM Software Developer’s Kit (SDK) lets independent software vendors (ISVs) and system integrators (SIs) to rapidly integrate advanced business process management capabilities into their applications. A comprehensive API provides the developer with unmatched capabilities when building applications that require process automation. The SDK includes everything needed to develop applications with workflow, including the Cardiff LiquidBPM Studio, the Cardiff LiquidBPM Engine, and the Cardiff LiquidBPM Manager.

**Other SDK features include:**

- Code generators to simplify integration with external systems through custom tasks. Code generators for interfacing with RMI, CORBA, EJB, and web services are included.
- Source code for pre-built end-user interfaces are included to accelerate development and integration of user-interaction components.
- Both thick and thin clients for the Cardiff LiquidBPM Manager, which can be used as-is or be fully customized and included within a larger GUI framework.
- Pre-defined tasks to define electronic forms and automatically generate them without any programming whatsoever.

**Flexible Automation and Workflow**

A highly-optimized runtime Java process engine component, the LiquidBPM Engine is the core component of LiquidBPM. Its numerous features include caching, thread-pooling, persistence, clustering, load balancing, notification and scalability. The LiquidBPM Engine’s ability to automate processes improves efficiency and increases throughput by enforcing predictable behavior within and between systems. For your customers, this means you can quickly and easily embed the LiquidBPM Engine into your application, harnessing its power to allow your customers to easily capture and define the processes they use.

**Enterprise Scalability and Connectivity**

The architecture of the Cardiff LiquidBPM Engine is suitable for high-performance, small footprint, embedded workflows, and scales to address enterprise-class needs with features such as support for LDAP, distributed workflows, fault-recovery, and persistence to all major databases including Oracle, Microsoft SQL Server, and MySQL.

The Cardiff LiquidBPM Engine is built on the Java platform, with an object-oriented framework that allows applications to define specialized behavior. XML is supported for the exchange of data between systems, and a rich set of APIs enable applications to be easily written.

**LiquidBPM features**

- Built to be embeddable
- Small footprint
- Rich API
- Thick or thin client
- Java based for multiplatform support
Drag-and-Drop Process Design

The Cardiff LiquidBPM Studio is a visual design integrated development environment (IDE) for programmers to develop processes by dragging and dropping predefined and custom tasks. The LiquidBPM Studio offers the ability to model complex processes, including sub-processes, attach data as attributes and launch and test data and processes-all without programming. Comprehensive APIs provide developers with unmatched capabilities when writing process applications. Further simplifying development, included code generators for interfacing with RMI, CORBA, EJB, .NET and Web services enable easy integration with external systems through custom tasks. Source code to build end-user interfaces is also provided to accelerate development and integration of user-interaction components.

The Studio’s Task Manager, available as both thick and Web clients, can be used as-is or fully customized for inclusion within a larger GUI framework.

Key Studio features

- Powerful built-in tasks for branching, looping, email, etc.
- Automatic web form generation
- Modeling of exception flows
- Escalation modeling
- Sub-workflow support
- Export to XML
- Workflow simulation
- Deployment tools
- Customization via XML with no programming
- Built-in templates
- Code generators for EJB, SOAP, CORBA interaction
- Predefined resource allocators
- Rules editor for rules engine
- Scripting support

The light footprint and embeddable design simplifies and accelerates the ability to embed LiquidBPM into your application, speeding time to market, dramatically lessening R&D costs.
Complete Process and Business Activity Monitoring

Business activity monitoring (BAM) and management services are provided by the Cardiff LiquidBPM Manager, which provides complete control and insight into the activity of your processes. Additional capabilities include isolating bottlenecks, gathering and analyzing statistics and reporting.

In addition to monitoring the health of the Cardiff LiquidBPM Engine, the LiquidBPM Manager monitors individual processes system resource consumption. Live processes can be quickly viewed in real time, while process analysis and bottleneck detection tools provide greater insight into active processes. Log and configuration viewing tools are also provided or you can build your own using the rich API. LiquidBPM Manager ships with a Java and a Web client.

Design and Deploy Business Processes as Web Services

The LiquidBPM BPEL Orchestrator offers an extensive set of tools to build and automate business processes that use Web services based on the BPEL4WS standard. BPEL4WS describes a way of defining process flows that interface with multiple Web services to accomplish a business objective. The LiquidBPM BPEL Orchestrator is the first implementation of the BPEL4WS standard that is based on a proven core engine and that includes a comprehensive toolset for design and monitoring.

Cardiff LiquidBPM BPEL Studio

The Cardiff LiquidBPM BPEL Studio is a visual design environment for building BPEL-compliant workflows. It provides import and export capability, and the ability to deploy and execute workflows. WSDL definitions are generated based on the process flow interaction requirements.

Cardiff LiquidBPM BPEL Engine

The Cardiff LiquidBPM BPEL Engine is a comprehensive orchestration runtime for executing BPEL flows. Built on the robust and proven Cardiff LiquidBPM technology, it supports interaction with Web services and XPath.

Cardiff LiquidBPM BPEL Manager

Cardiff LiquidBPM BPEL Manager provides monitoring and management services that give you complete control and insight into the activity of your processes individually and as a collective group.

LBPM Platform Support

Operating Systems:
- Microsoft Windows XP
- Microsoft Windows Server 2003
- Sun Solaris 10 SPARC
- Sun Solaris 10 x86
- Red Hat Linux 9

App servers:
- Apache Tomcat 5.0
- BEA WebLogic 8.1
- JBoss 4.0
- IBM WebSphere 5.1

Database:
- Microsoft SQL Server 2005
- MySQL 5.0
- Oracle 10