

The best answer  
to a tough problem.







A breakthrough has an aura of magic. As a child, it's that moment when multiplication suddenly makes sense and counting fingers is no longer necessary. After this, life will never be exactly the same. Old rules and techniques are discarded for newer, smarter ones.

#### **THE REALITY OF BUSINESS TODAY**

As competitive as the market is today, companies need inventive, revolutionary solutions on a regular basis just to remain competitive. Breakthroughs must be the norm, not the exception.

Good software systems increase efficiencies or create new markets, ensuring that business breakthroughs happen. For example, software development could lower operating costs, providing the funds to begin product development. Or, if a technology product has a niche following but needs momentum in the market, a retooling of the software might be in order.

#### **INTRODUCTIONS ARE IN ORDER**

We are Breakthrough Technologies, a team of dedicated engineers who create custom software solutions for complex business problems.

Our job is to help companies help their customers. We provide the best in software that is user-focused, so that our clients become distinguished in their markets and gain the competitive advantages that they need.

Our approach is end-to-end. We manage and execute each phase of the software development life cycle, from requirements analysis, to design, to testing, to deployment.

## How, exactly, can we help?

For business problems that can be solved through technology, our role is to define and deliver. Our team of experienced professionals will conduct a thorough analysis of your business or system challenge. We make it our priority to define the problem comprehensively from the start, resulting in greater efficiencies as the project unfolds. Our analysis may lead us to recommend customizing and implementing an off-the-shelf software package, or we may suggest making modifications to your existing system to increase functionality. If invention is needed, we can develop a custom solution that cleanly addresses your requirements.

Our engineers solve software problems thoroughly. Since we do not outsource core software development, our clients can depend on our efficient use of resources.

## It's all in the box.

The three big questions in software development are: What does the software do? How long will it take to develop? How expensive will it be? Time, money, and functionality are always in conflict. At Breakthrough, we face that problem head on with a development solution called Software Development in a Box.

This process involves the careful coordination of competing resources, given the larger business objective. Ultimately, we provide our clients with a powerful and comprehensive plan that allows them to make informed decisions about increasing or reducing particular resources. This plan also helps to ensure that there are no surprises along the way.

## How involved do you want to be?

We recognize that every software development project has different goals, needs, and resources. In order to produce the best solution with the minimum risk and the maximum efficiency, we remain entirely flexible about how we work with our clients. We offer two models that are at opposite ends of the spectrum; most of our clients locate themselves somewhere in the middle.

### WHITE BOX

The white box model allows clients to be actively involved in all phases of development, implementation, and testing. Client staff members join the Breakthrough team at a dedicated development center during scheduled hours. In the course of the project, these staff members become true owners of the new software as they learn to troubleshoot and train others in its use. This level of client involvement makes Breakthrough's process transparent and provides added insurance against risk.

### BLACK BOX

For some companies and projects, more limited client involvement is appropriate. With the black box approach, collaboration between the client and Breakthrough occurs in the form of regularly scheduled updates and feedback meetings; these assure that the approved project plan is executed completely. This model allows the client to use limited resources strategically and remain involved in crucial project decisions.

### CLIENT INVOLVEMENT



#### black box

Project plan approval  
Requirements analysis  
Design review  
Prototype/user interface sign-off  
Test plan review  
Product acceptance

*Breakthrough's model allows clients to determine their level of involvement in any given project.*

#### white box

Design consultation  
Software product selection  
Code review  
QC test review  
Product implementation  
System maintenance

## The way things can work.

### DEVELOPMENT SITE

We do the majority of our software development work at our own technologically advanced development center. This environment facilitates Breakthrough's focused approach to solving problems and minimizes the need for clients to invest in overhead, such as square footage, desks, phones, computers, and printers, which are necessary to support onsite developers.

### ASSESSMENT

- 1 In any project, our first step is always the same. We consider the project needs comprehensively, including timing, staffing, and deliverables. We also recognize the larger IT and business environment, as it is here that the software must operate and will ultimately be tested. We then write a contract, which serves two purposes: first, we quote a fixed price for the identified work. Second, we include a complete action plan which defines scope, resources, and milestones.

### DEVELOPMENT

- 2 Next, we analyze business requirements and evaluate the processes that support them. Our specialized consulting staff conducts stakeholder interviews and feedback sessions, and then documents their findings for the development team and process consultants. Ultimately, this process allows users' needs to be realized in the software we develop.

### IMPLEMENTATION

- 3 Finally, the software solution is implemented and integrated into the client's existing technology and business infrastructure. Because of the detailed planning, analysis, and feedback sessions that were part of the earlier stages, the cost of technology transfer is now greatly reduced in terms of both dollars and disruptions.

### ADDITIONAL NEEDS

To ensure a complete software solution for our clients, we have developed strategic partnerships that allow us to offer training, system documentation, interface design, and web design, as needed.

### QUESTIONS TO CONSIDER

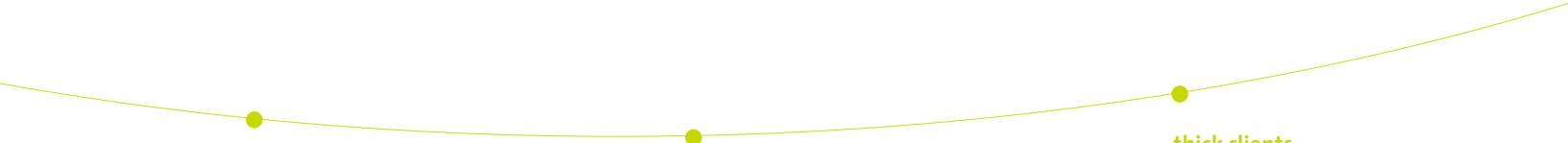
Do you need a systems development team who can understand, appreciate, and help you meet your business objectives?

Are you deciding between an existing software package and custom software?

Are you tired of developers who propose complex systems that cannot integrate easily into your infrastructure or are costly to maintain?

Is reducing the risk associated with development projects an important priority?

# Breakthrough's software development technologies have been applied within intranets and across the globe.



● embedded systems  
in consumer products

● web-hosted application services

● thick clients

## What we bring to the table.

### CLIENT-SIDE TECHNOLOGIES

We are extremely experienced in the custom development of client-side software applications that are packaged and resold by our clients.

We have developed a variety of applications for the desktop Windows environment using implementation languages, such as Visual Basic, C++, C, and Java.

We have utilized various frameworks for development, including Visual Studio .NET, MFC, ATL, STL, and the AWT and Swing tool kits for Java.

Client-side components have also been a critical part of most of our products, including the integration of third party components, custom DLLs and COM objects.

The quality of our development capabilities is most evident in our capacity to support embedded solutions using pSOS, Windows CE and other operating systems on proprietary, Pocket PC or Palm OS platforms.

Breakthrough has experience developing software applications that embrace internationalization and localization, utilize Unicode for data storage and character representation, and employ language-specific interface components to optimize reuse and accommodate the addition of new interface languages over time.

### SERVER-SIDE TECHNOLOGIES

Breakthrough has developed custom software systems that comprise clients' full-line product and service offerings.

We have developed the frontline application and web services for B2B and B2C solutions. For years our teams have recognized that XML and XML technologies (such as XSLT, Schemas and SOAP) provide the key to interoperability. We have incorporated XML technologies into our customers' solutions since 1999.

Breakthrough has developed business systems that serve as the backbone for clients' back office operations.

Our implementation teams have deep experience in a large number of server-side scripting technologies, including JavaScript, VBScript, and Active Server Pages.

Security has always been key to our clients' mission critical systems. Our teams have mastered HTTPS and PGP, as well as worked with third party and proprietary encryption environments and SDKs.

Breakthrough has expertise in many server technologies, including the .NET framework, MTS, COM, and COM+.

By utilizing proven measurement tools and techniques and sound engineering practices, we have executed performance analysis studies on new and legacy systems and have implemented radical performance improvements.

components integrated  
into larger systems

systems integrated  
into back office operations

#### **DATABASE TECHNOLOGIES**

Our database solutions have included client and server-side implementations.

We have implemented solutions across a wide array of DBMSs, although we have focused on different versions of Oracle and SQL Server.

Our solutions have encompassed a broad array of client database access technologies, including ODBC, ADO, OLE DB, and JDBC.

We have employed a variety of query languages, including SQL, T-SQL, and stored procedures.

We have utilized tools, like CAST and ERWin, to optimize the management and documentation of database systems and have performed value-added analytical tasks, such as dependency analysis for changes to legacy systems.

## Bells and whistles.

Since we are committed to eliminating risk in software development, we offer several services to supplement the development itself and ensure a smooth and affordable transition to new technology. These include:

Software development process consultation

Jump Start software development methodology

E-business and Internet integration

Tool evaluation and selection

Components

Designing organizational interfaces with SOAP-based Web services

Hosting traditional software systems as Web-based application services

## Our industry expertise.

We have worked across a variety of industries with many interdisciplinary teams. These include:

Pharmaceutical

Publishing

Content management and delivery

Inventory management

E-commerce

Manufacturing

Hospital products

Corporate incentives

Scientific computing

Customer support

Finance

Computer-based testing

Consumer products

## Get in touch.

Whether its purpose is to optimize business processes, provide proof-of-concept for funding, or create a product line to drive success in a new market, our software solves problems. We are committed to understanding our clients' priorities in business; we create custom technology that addresses their needs.



[www.breaktech.com](http://www.breaktech.com)