



## **Questionmark's Holistic Approach Assessments systems for the enterprise**

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## Introduction

The power of the client-server software solutions combined with infrastructures such as the Internet and intranets have empowered many businesses to take control of their own computerized solutions. Where once data would have been compiled and provided by external consultants, today the same information is being authored and analyzed on the desktop using powerful software applications. Enterprise software providers have managed this ingeniously by providing, not just software and networking solutions, but research and modeling data as well as consultancy to enable their clients to take possession of their own business data and solutions.

Today, assessment software is increasingly being used on an enterprise-wide basis. And the growing power of the software is enabling its users to take on more and more assessment and survey-related tasks that would once have demanded the services of outside consultants. Questionmark recognizes this change and has now extended its services to enable its users to benefit from a huge range of internal and external services and documentation. This new 'holistic' approach means that you now have access to a full range of services that constitute everything you need to know about assessment coupled with everything you need to create a successful testing and assessment environment.

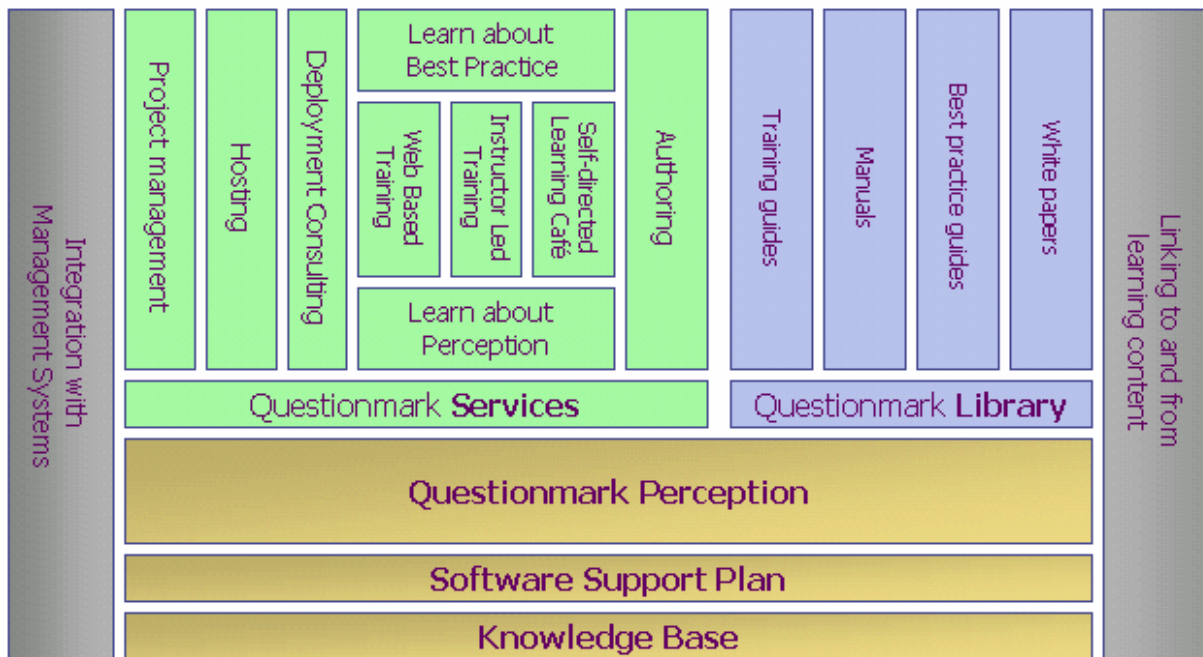


Diagram 1 illustrates this set of services dovetailed into Questionmark's Perception product. By bringing together services, documentation and the knowledge of external consultants, content developers and software manufacturers, Questionmark can help to ensure that your assessment software implementation goes perfectly throughout its lifetime.

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## Questionmark Perception

Questionmark Perception enables educators and trainers to write, administer and report on assessments via PCs, local area networks, the Internet and intranets. It enables users to deliver assessments in both online and network/CD environments.

Questionmark Perception provides:

- Easy authoring with question wizards
- Indexed question banks
- Multi-level security options
- Delivery of assessments on-line or off line
- Topic-based feedback and scoring
- Nine report types for analysis of results
- Permanent records



Perception is the basis of Questionmark's holistic solution package. Its scalable, extendable architecture means it provides the perfect software foundation on which to base your enterprise wide assessment solutions.

## Software Support Plan

Questionmark's Software Support Plan provides access to online resources, telephone and email support provided by Questionmark's software support teams. Questionmark's experienced technical staffs possess the in-depth product knowledge required to provide you with intelligent and speedy technical services.

It is also the only way to get all the latest full and point release product updates and a free subscription to the full breath of the Questionmark Communities.

## Knowledge Base

Access to Questionmark's powerful knowledgebase is provided as part of the Questionmark SSP. It provides the answers to hundreds of questions to enable users to easily and quickly answer queries about Perception and other issues surrounding computerized assessment. The Knowledge Base is an essential part of the Perception environment. It represents the accumulated understanding and advice provided to Perception users worldwide. This is the kind of resource that money can't buy—genuine understanding of genuine issues about Perception and associated software issues that can help you to get the best from your system.

## Questionmark Services

Questionmark services constitute a suite of training and consulting solutions designed to enable both new and existing users to get the best from their testing and assessment solutions.

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## Hosting

Questionmark hosting services are ideal if you have short-term assessment projects or don't have access to the technical resources to enable you to host your own copy of Perception. Questionmark hosting services help you assemble an assessment solution with best-in-breed features while relieving you of hardware purchases, upgrades, and maintenance expenses. You don't need to worry about the technology. You'll be focused on getting results. Charges can be made for as little as a month at a time.

## Deployment Consulting

Questionmark offers a full deployment consultancy service that enables you to understand how to set up Perception for the best possible scalability and to integrate with your existing training or learning software environment. Questionmark experts can advise you about the best way to set up your web server, network infrastructures, setting up authors to easily export to the server and many other issues to make your Perception assessment solution a practical and powerful tool. More information about Deployment Consulting can be obtained from your nearest Questionmark office.

## Project Management

Questionmark can also advise you about managing your survey, test or assessment projects. Our in-depth experience enables us to advise on key issues such as:

- Security
- Speed
- Authoring requirements
- Choosing and using the correct components

More information about Questionmark Project Management Services can be obtained from your nearest Questionmark office.

## Authoring

Many new Questionmark users have already use assessments extensively using other delivery methods. These questions may have taken many hours to generate and form a valuable resource. In these cases it is common for them to wish to leverage them in their new Perception environment.

To support that migration, Questionmark offers a full set of expert authoring services to enable users to import or simply type in question and assessment content. This enables users to move swiftly and painlessly to their new environment, taking with them all the positive aspects of their previous work.

More information about Questionmark Authoring Services can be obtained from your nearest Questionmark office.

## Learn about Perception and Best Practice

Perception Software is the perfect framework to enable you to create and use tests, assessments and surveys. But just because you use Microsoft Word it doesn't mean to say that you can write a

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best selling novel. And to become a great question and assessment publisher, it helps to know what are the proven solutions and concepts surrounding these that are used by other assessment authors.

To enable you to discover more about the question process and to get the best out of Perception, Questionmark now also provides you with the opportunity to discover more about computerised assessment. The company provides a range of services within its Instructor-led training programs, the popular Questionmark Learning Café and its web-based training programs. Together they form a powerful, easy to access solution to enable you to learn about the Perception software and the best way to author, publish your assessments and publish the results:

### **Instructor-led training**

Instructor-led training can be provided for all aspects of Questionmark Perception, either at your offices or in Questionmark's own training rooms. A range of comprehensive full-day courses cover all aspects of:

- Question authoring and test design using Perception Windows Authoring applications
- Scheduling, reporting and delivering assessments using Perception Enterprise Manager

Questionmark's knowledgeable instructors can also provide specialist courses covering topics such as template design.

Details about Questionmark's training solutions can be found on the web at: <http://www.questionmark.com/> - choose Training on the left hand menu.

### **Web Based**

Questionmark is also able to provide live courses over the web for those who are unable to travel or where a company may have users spread over a wider area. Questionmark's own knowledgeable instructors deliver the training.

Details about Questionmark's training solutions can be found on the web at: <http://www.questionmark.com/> - choose Training on the left hand menu.

### **Learning Café**

Learning Café is a free Questionmark resource with a wealth of learning and information. The Learning Café is a library of learning materials to help you understand the issues you will encounter as you develop your assessments. Learning is available via several subject-specific modules. The Learning Café is located at:

<http://www.questionmark.com/> - choose Learning Cafe on the left hand menu.

## **Questionmark Library**

Questionmark's dedication to the assessment business over many years has enabled the company to build a vast array of data and written information about computerised assessment and all aspects of deploying assessment and the best practices that surround that deployment. This information has now been conglomerated into a single free to access resource in Questionmark Communities called the Questionmark Library. The Library includes informative white papers, best practice guides, manuals and training guides (see below). It also offers an informative series of documents and PowerPoint presentations, on a wide-ranging set of subjects including:

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- An Employer's Guide to Good Practices
  - How to Create Fair & Accurate Tests
  - Use of Assessments through the learning process
  - Kirkpatrick Model - 4 levels of Evaluation
  - The Instructional Design process
  - Features, benefits and deployment issues with computerized assessments
  - Low, medium and high stakes assessments
  - Simple statistics you will like to understand
  - Question types used in computerized assessments

To access the library, you should visit and join Questionmark Communities at:  
[www.questionmark.com/communities](http://www.questionmark.com/communities)

### **Training Guides**

Questionmark's training services are backed up by a full set of training guides, created by its own instructional designers. These cover all aspects of your Questionmark training and act as a valuable reference to help you recall and check your knowledge. They also contain useful exercises to help you measure the success of your training.

Training Guides are supplied as an integral part of your Questionmark training but may also be purchased separately by contacting your nearest Questionmark office or distributor.

### **Manuals**

A comprehensive set of easy-to-understand Perception Manuals provide the perfect reference point. There are four manuals that support the software

- A 'Getting Started' guide will have you up and running with Perception in the fastest time frame.
- The comprehensive Authoring manual provides power users with all the information they would ever need to leverage the full capability of the Question Manager and Assessment Manager desktop authoring package software. It also describes the key concepts in authoring questions and assessments.
- The Web Deployment Guide covers all aspects to enable users to get their assessment server running together with user information on managing web delivery, reporting, scheduling, browser-based authoring and other aspects of the server based software.
- The Windows Deployment Guide describes how you can publish assessments to a Windows network, take assessments with Presenter and how to use the Windows Reporter.

The Manuals are available either directly from the web (within Questionmark Communities) or as printed volumes. Go to Questionmark Communities at:  
<http://www.questionmark.com/communities/>. Printed volumes are available as part of the Perception software purchase. Extra copies can be purchased by contacting your nearest Questionmark office or distributor.

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## Best Practice guides

Best Practice guides have been built up from Questionmark's own research into system's performance and recommendations to help you and your systems management team understand how to get the most from your Perception implementation. The Best Practice Guides cover a range of diverse subjects including:

- Scalability enabling you to get the best from Perception Server when using large scale implementations
- Multiple Author
- Accessibility
- Planning Certification Programmes

Best practice guides can be found within the Resource section of Questionmark Communities at <http://www.questionmark.com/communities/>.

## White Papers

Questionmark white papers are renowned within the industry, providing thought-provoking ideas and solutions. Written by leading practitioners, some of the current white papers available from Questionmark include:

- Creating and Deploying Computerized Level 1 Assessments – discusses trainee reaction surveys as a strategy for training evaluation and issues to consider when creating a trainee reaction survey, the advantages of computerizing student reaction surveys and how to author and administer trainee reaction surveys using Questionmark Perception.
- The Learning Benefits of Asking Questions - details the learning benefits of asking questions and references research that shows that questions can produce significant learning and performance benefits, potentially improving learning by 150% or more
- Training Evaluations in Organizations - prepared by Dr. Paul Squires this paper describes approaches to training evaluation, discusses why poor evaluations of training are commonplace and suggests solutions.
- Perception to Go: empowering disconnected delivery of assessments - looks at these underlying technologies behind Perception to Go and how they are deployed to create a powerful new solution for trainers who wish to deliver tests, assessments and surveys online.

Questionmark White Papers can be found within Resource section of Questionmark Communities at <http://www.questionmark.com/communities/>.

## Integration with Learning Management Systems

Questionmark offers a range of solutions to enable its users to integrate Perception with Management Systems, including learning management systems, course management systems, learning content management systems and virtual learning environments. QMWISe, an application program interface that allows developers to access and interact with Questionmark Perception, offers the most powerful solution. QMWISe is a web service that enables applications at one point on the web, or an intranet, to gather information or run other applications from elsewhere on the

web or intranet. The key technologies used by QMWise are XML and the Simple Object Access Protocol (SOAP).

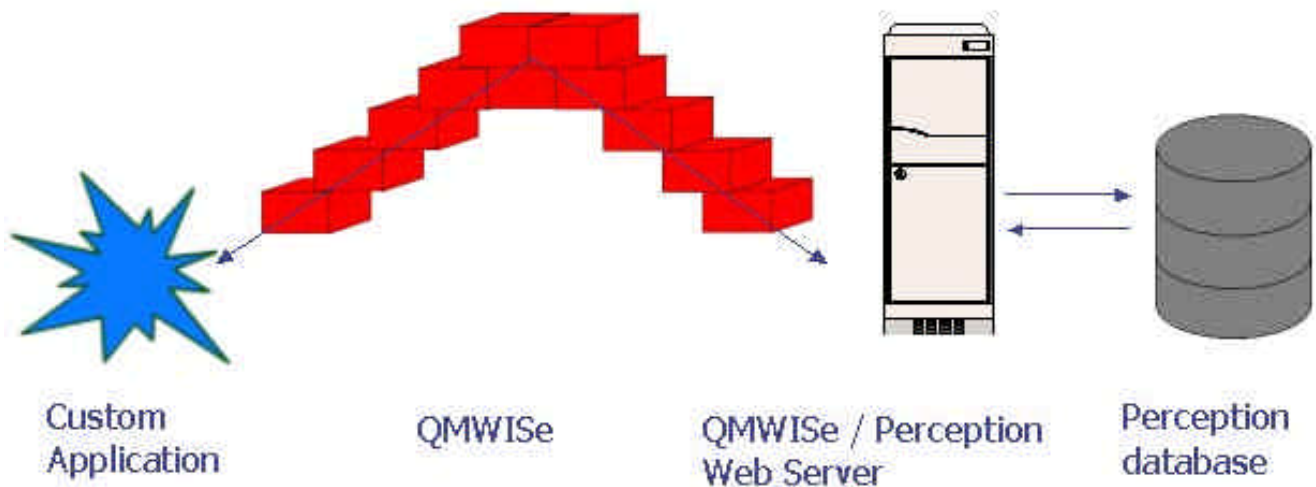


Figure 3: QMWise provides an easy-to-configure bridge between Custom Applications and the Perception web server.

In addition to QMWise, Questionmark also provides dedicated 'Connectors' to enable you to leverage standards to connect systems. They include:

- AICC Connector, which enables you to build links using the Aviation Industry CBT Committee (AICC) Computer-Managed Instruction application (CMI) interface to launch and track a assessments (AUs). This uses the HACP protocol over standard internet (http) links.
- SCORM Connector, which enables you to link from a management system to Questionmark Perception using Advanced Distributed Learning's (ADL's) v1.2 Sharable Content Object Reference Model (SCORM) to launch and track a assessments (SCOs).
- A Blackboard Connector, which allows instructors to seamlessly access the Perception assessment authoring tool, add Perception assessments to their courses. This allows students to take Perception assessments, receive feedback, have their answers scored, and then have the summary of their results inserted into the Blackboard Gradebook.

In addition to these standard connectors Questionmark has full documentation of many existing links to the most popular LMS's. They include:

- Thing
- WebCT
- Blackboard
- Fretwell Downing Le
- Peoplesoft ERM
- Saba
- DKSystems OnTrack
- Plateau Systems
- WBT Manager

Aside from these, Perception can link directly to most management systems. For more information about these links, contact your nearest Questionmark office.

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## Linking to and from Learning Content

Questionmark Perception can be linked to and from learning content in a variety of ways.

Office Connector makes it easy to launch quizzes, tests, surveys and questionnaires from Microsoft Office documents. This tool is freely available to Perception users. Office Connector can be installed within Microsoft Office 2000 and Office XP for use with:

- Microsoft Word
- Microsoft Outlook (with Word as email editor)
- Microsoft Excel
- Microsoft PowerPoint
- Microsoft FrontPage.

Questionmark also offers Content Packager, a standards-based Windows desktop application that lets you export information about assessments to other applications for easy referencing, indexing, and scheduling. This information can take the form of course structure files, manifests and content packages. This enables much closer integration with the content in your Learning Management System.

## Summary

Questionmark can call upon many years of experience within the assessment software business. Moreover it is an organisation focused purely on that business – it does not produce software for any other purpose. It is this background that has enabled the company to create such a broad band of supporting resources for its Perception software.

By combining this knowledge into this new 'holistic' approach, Questionmark aims to provide easy access to its knowledge and provide users with everything they need to know to create a successful testing and assessment environment.

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## About Questionmark:

Questionmark has been producing testing and assessment software since 1988. Businesses, governments, schools, colleges, and universities in more than 50 countries use Questionmark software. Questionmark has more than 1,700 customers using Perception, with approximately 11,000 authoring systems installed, and systems shipped have been configured millions of participants. Typical applications include exams, quizzes, study aids, course evaluations, surveys, diagnostic tests, pre-course skills assessments, and course evaluations.

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