

**Robert A. Biedenarn**

3276 Shadylake Drive  
Loveland, OH 45140-5598

*Mobile Phone:* +1 513-295-4739

*Email:* Rob@AgileConsultingLLC.com

*URL:* <http://agileconsultingllc.com>

*Skype:* rob.biedenarn

---

**Professional Objective**

---

To help the clients of Agile Consulting LLC achieve their objectives by applying my knowledge and skills.

To utilize my technical skills in dynamic and challenging environments which will improve the overall strength of the client. I've worked in both service- and product-based industries and am adept at bridging the divide between business and technology.

Working with a variety of companies I can provide tactical support to projects with far greater diversity than is likely to be found in any single company. Much of my early career achieved this through taking a full-time position at a new company and occasionally relocating. Telecommuting or periodic travel is acceptable, but relocation is not currently desired.

---

**Education**

---

**Massachusetts Institute of Technology**  
**SB in Computer Science and Engineering, 1987**

---

**Project Experience**

---

**Web-based Applications:**

- Certification and Membership: (January 2011-Present)

Assumed development and support of the web presence for a certification organization. The site maintains the course listings for over 300 trainers and the certification records for over 600,000 persons worldwide.

The site is integrated with several other systems which provide CMS functions, online testing services, and processing of certification payments.

- Internal Dashboard for Internet Advertising: (May 2009-August 2009)

Collect cost and revenue data from several web-based sources in order to evaluate overall effectiveness and ROI for marketing campaigns.

- Customer-facing Shopping Portal: (January 2007-June 2013)

Providing a selection of products obtained from datafeeds of various types and representing goods that are typically selected ultimately on aesthetics, not strictly function or price, the target audience differs significantly from the users of more common shopping sites that focus on price or feature comparison.

Incorporating a patented process for matching and ranking a collection of products based on a small set of preferences supplied by the user, the application's goal is to maximize the number of products that the user will like from the initial results.

**Warehouse Management Systems:**

- WMS Selection: (1999-2000)

Key member of the team selecting and evaluating a possible replacement WMS for retail and direct-to-consumer facilities. Phone screening, vendor visits, customer site visits, and intensive, four-day evaluation of the two finalists (Retek DMS, Manhattan Associates PkMS). I personally led the technical evaluations of the vendors' systems.

- RGTI: (1997-2005)

A third-party warehouse management system taken in-house by Gap in 1998. I developed application coding standards and initiated a code-review process. Tremendous improvements were made following the adoption of Parasoft Insure++ to automate the discovery of many erroneous and questionable source code constructs. I have been continually involved in the specification and design of enhancements to the system.

In 1997–1998, Gap used Mercury Interactive’s LoadRunner to drive a performance test of the RGTI system. I was involved in the initial implementation of the vUser (“virtual user”) programs which simulated the system activities performed by workers with mobile RF data terminals. Based on average task timings provided by Gap’s industrial engineers, realistic delays for startup and travel time were incorporated into the scenario. This work led to the discovery of bottlenecks in the WMS task assignment algorithm early enough to implement improvements prior to the system’s operational launch. A separate set of vUsers was developed to provide a basic, automated “smoke test” that exercises the essential capabilities of the WMS. This smoke test has been maintained and enhanced continually and must be “passed” by the WMS prior to beginning any integration or acceptance testing.

- Euro conversion: (2001)

Ensured that the introduction of support for the Euro into Gap corporate systems did not adversely impact the distribution centers and participated in the integration and acceptance testing. Price ticket downloads to the UK system that supplied EU stores was necessarily impacted and was modified accordingly, but the same application is in place in the US and Canada.

- Facility Configuration and Startup: (1999)

Acted as the “facility lead” for the startup of an automated full-case distribution facility in Gallatin, TN. Reviewed the “Description of Operation” document with the facility director and the receiving and shipping managers. Wrote functional designs to incorporate new procedures into the WMS. Worked with facility managers to determine the storage location naming scheme and putaway protocol to minimize aisle congestion and reduce total travel for putaway and retrieval.

- Legacy to RGTI WMS conversion: (1998–1999)

Managed the first conversion from internal systems to the RGTI WMS at a Gap full-case distribution center. Facilitated the emergency retro-conversion from RGTI WMS back to Gap’s Legacy WMS at the first break-case distribution center when serious performance problems surfaced just days after going live. Managed the “live-test” of the RGTI WMS to prove acceptable performance. This involved a planned conversion to the RGTI WMS, full scale processing in a production facility, and conversion back to the Legacy WMS in a single week.

### **Transportation Management Systems:**

- Quality Store Service initiative: (2002–2004)

A multi-year effort to identify and eliminate the root cause of store delivery failures — those shipments not delivered within a two-hour window on the planned date. Improved data quality and timeliness and provided additional reports to help the transportation department with root cause research.

- Carton Matching: (2001–2005)

Originally designed and deployed to permit more accurate and timely resolution of freight claims, carton information from the DC shipping manifest is matched against the receipt information provided by 3PLs and by stores. This provides the Transportation department with a rich and detailed story of the life of each carton that leaves a DC en route to a store. Reports are produced using Business Objects™ from the data stored in an Oracle database.

- TMI Performance Testing: (2003)

Simulated allocation and DC shipping activity in a production-equivalent laboratory environment.

### **Leading Edge Technologies:**

- RFID — Gap Technology Summit: (September 2004)

Worked with a vendor (Avicon) to demonstrate Radio Frequency Identification technology to Gap Inc employees at a two-day internal “tradeshaw” event. Explained the results obtained during Gap’s four month, single DC, single store pilot in 2001 of all denim tagged at the unit level. Discussed benefits and obstacles of RFID tagging at the unit and case level including current Wal\*Mart and Department of Defense requirements.

- Speech Recognition: (1998)

Assisted in the technical evaluation of mobile hands-free, eyes-free system for manual unit picking based on a device with speech recognition and text-to-speech capabilities. Both speaker-dependent and speaker-independent systems were considered.

- Print and Apply system for full case facility: (1999)

A new print-and-apply labeling system was installed as part of the capabilities for a full-case only facility. Pallets of cartons would be delivered to a conveyor throw-on area where the cartons would be scanned and a shipping label would

be automatically applied. Labeled cartons would be automatically conveyed to the appropriate dock door for loading. Main designer of the WMS interface to the system and the contact point for the third-party developer constructing the software for the print-and-apply scanner.

- MQSeries: (1997–2000)

Worked with Gap’s electronic commerce team to evaluate a new data transport system to replace the “EDI via FTP” solution for internal communications between Gap’s headquarters applications (mainframe) and WMS applications (Unix). Reviewed various products from six vendors before selecting IBM’s MQSeries and performed the Unix-based portion of a proof-of-concept pilot.

Developed the suite of utilities and libraries to insulate applications on HP-UX, Solaris, or WindowsNT from direct interaction with MQSeries. With only minor changes, these applications are still in use in 17 DCs after eight years.

- DC Web: (2001–2005)

Maintained internal departmental web site using HTML, CSS, and CGI (Perl with HTML::Template and CGI modules). Posted monthly dashboard results from the Supply Chain IT and Transportation departments. Trained an Administrative Assistant in the business-focused engineering services group on how to publish their monthly project status reports and dashboard to this web site.

- Data collection for “Perpetual and Financial Inventory”: (2004)

Perl scripts to collect data from all DC-to-HQ transactions and send copies in real-time via TCP to a Java-based server to facilitate functional and performance testing. These scripts were required to have no impact to production processing and yet be delivered to the test system at an equivalent rate.

- Development Tools evaluation: (2003)

Determine the adjustments to security rights and policies required to install and use the suite of Java development tools for a new project. (WebSphere Studio Application Developer, XMLspy, PVCS Dimensions)

## Work History

---

### Scrum Alliance

Denver, CO

#### Consultant

January 2011–Present

Maintenance, support, and continual feature development for this certification organization having over 600,000 members. Their Rails application began in 2006 and evolved for five years under various other development teams prior to Gaslight becoming the primary development team and then Agile Consulting assuming the primary role in 2012. While not quite a “rescue” project, there is considerable inertia in this old code base which is steadily being brought into the present.

#### *Achievements:*

- Membership grew from about 150,000 in 2011 to over 400,000 in 2015.
- Many issues that were traced to defects introduced to the code in 2010 were corrected and greatly reduced the burden on the Members Services staff.
- Helped Scrum Alliance select a vendor to off-load CMS functions to a separate platform to replace the bespoke system build in Rails (which retained the certification functions).
- Evaluated technical candidates for the first internal staff positions supporting the web presence and, in the case of their internal Ruby on Rails developer, conducted an evaluation period as a subcontractor before a full-time offer was extended.

### Mailtank

(remote)

#### Consultant

November 2016–November 2016

Evaluate an application hosted on Heroku for ways to reduce the cost and extend the sunset period. ROI was less than two months.

#### *Achievements:*

- Reduce the monthly Heroku costs from \$650/month to about \$310/month.

### Gaslight

Cincinnati, OH

#### Consultant

September 2016–September 2016

Assist in troubleshooting a network API being developed for use by Gaslight’s client. Identified several inconsistencies in how the custom protocol was being used.

### Top Gun Sales Performance

Mason, OH

#### Consultant

June 2010–January 2011

Replacing a lead-tracking and qualification application with an in-house Ruby on Rails application that will enhance agent productivity provide greater visibility to the full life-cycle of leads.

*Achievements:*

- The client's internal staff is also being mentored during the development process so that they can assume the on-going development and maintenance of the application.

**Publishers Clearing House**

New York, NY

**Consultant**

February 2010–March 2010

Built a working prototype of the PCHLotto site using Ruby on Rails and MongoDB with a goal of PCH approving a full project to replace several .Net/Flash sites with Rails/JavaScript.

*Achievements:*

- The application was completed in time, but PCH decided to continue with .Net and the project ended.

**SCRIP-SAFE Security Products, Inc.**

Loveland, OH

**Consultant**

October 2007–Present

Assisting in the development of an electronic transcript delivery system using Ruby on Rails. Providing guidance, installation, and support for co-located servers running several customer-facing applications. Links to the company site <http://www.scrip-safe.com/> and the application <https://escrip-safe.com/>.

*Achievements:*

- Developed an API for high-volume transcript senders to submit transcript PDFs directly to the eSCRIP-SAFE application. The initial school using the API averages 10,000 transcripts sent per month.
- Produced an export of invoicing data for directly creating invoice entries in the company's accounting system and importing final invoices and subsequent payment information to be visible to customers.
- Invoicing for a full calendar quarter can now be completed and verified in just a few hours.

**Stylepath Corporation**

Lincoln, MA

**Consultant**

January 2007–Present

Development of a shopping portal application using Ruby on Rails and incorporating a patented process of evaluating the aesthetic taste of the shopper. <http://stylepath.com/>

*Achievements:*

- Configured a dedicated server for the very database-intensive operation of the site and dramatically improved performance.
- APDEX for 2.0 sec. between 0.4 and 0.6 improved to an APDEX for 1.0 sec. of 0.97 or better).

**Solid Stone, LLC**

Las Vegas, NV

**Consultant**

May 2009–August 2009

Develop an application that collects and presents statistics on internet advertising.

**Miami University – Project Dragonfly**

Oxford, OH

**Consultant**

August 2007–June 2008

Development of a Ruby on Rails application to create and present "Public Inquiry Modules" to patrons of various Zoos and Aquariums that are part of the Wild Research group. The intent is to personally engage children in a hand-on role of an investigator creating and testing hypotheses through scientific observation.

**Rankaroo, Ltd.**

Columbus, OH

**Consultant**

May 2006–July 2008

Development of a web application using Ruby on Rails based on social networking. <http://rankaroo.com/> (No longer operational.)

**Affinity Group, Inc.**

Englewood, CO

**Consultant**

August 2005–January 2007

Conversion of HP-UX Korn shell scripts to Perl in anticipation of a migration to an MS-Windows platform in 2006. Database conversion from Sybase to Sql Server using the Perl DBI layer.

**Huron Technologies, LLC**

Chicago, IL

**Consultant**

January 2006–April 2006

Development of a browser-based application using Ruby on Rails targeting the healthcare industry. (Not commercially launched.)

**Triplefin, LLC**

Blue Ash, OH

**Information Systems Consultant**

June 2005–August 2005

Implement solutions using Java and various utilities to support order management and fulfillment services provided by Triplefin to its clients. Environment was mixed Linux and Windows platforms with MS-SQL and Oracle databases. A

warehouse and distribution management system from Tecsys was integrated with a proprietary, in-house application supporting web-based B2B and B2C order fulfillment.

*Achievements:*

- Notification Service for a “Knowledge Database” application which managed sending email (or pager) notifications based on matching attributes of events entered by customer service representatives (e.g., product tampering).
- Produce various accounts receivable reports to reconcile invoicing between order management and distribution management systems.
- Investigated and documented many automated processes which had achieved “magic” status as a result of changes in systems and personnel and had ceased performing as expected.

**Gap Inc.**

Erlanger, KY

**Senior IT Team Leader**

1996–2005

The Northern Kentucky branch of the Supply Chain IT department managing the application systems used in Gap Inc’s distribution centers and centralized transportation management.

Led a Technical Architecture Team (2002–2005) consisting of members drawn from across the various application-focused areas. This team set the strategic vision for the technical infrastructure across all projects and systems including the relationships between internal and vendor-supported applications.

Led the Business Solutions Services team (2000–2002) within Supply Chain IT consisting of eight Analysts. Responsible for consulting on business processes and system enhancement issues for distribution and transportation systems. Produced functional designs for system enhancements arising from projects, new material handling equipment, and prioritized requests from distribution center personnel.

IBM User Centered Design for MQSeries 5.1 (1998) — Invited by IBM to participate in the UCD session held at their development headquarters at Hursley Park in the UK.

Participated in a series of organizational transformation discussions at Gap’s IT headquarters in San Bruno, CA (1996–1997). Represented a non-management perspective of the team in Northern Kentucky to the group of about thirty including the CIO and selected VPs, Directors, and Managers. Continued to work with RGTI toward the delivery of a new WMS package including the supervision of Gap-retained contract programmers.

**Metro Information Services, Inc.**

Florence, KY

**Information Systems Consultant**

1995–1996

Assigned to Gap Inc. to implement a pilot WMS for use in training Gap distribution employees in “CD Flow” processing. Gap was planning the launch of a third-party WMS in a new 300,000 sq.ft. facility devoted to full-case processing. Cases were received pre-allocated to stores and would be palletized for shipment prior to putaway into storage. Receipts from several vendors would be processed over several days or weeks and released for delivery together in accordance with Gap’s marketing strategy. Led the Unix development team in the enhancement of the CD Flow WMS to prepare it for installation when the third-party system was not delivered on time. Provided significant support for the facility during startup and into the post-implementation period.

*Achievements:*

- Pilot system delivered on-budget and ahead of schedule with an additional set of inquiry screens not included in the original scope.
- Expanded system was installed in time for the facility opening and was the operational WMS for a period of 14 months.

**American Computer Technology, Inc.**

Norwood, OH

**Software Engineer**

1992–1995

Responsible for the enhancement, maintenance, and technical support of a third-tier warehouse management system. The system included full financial (A/P, A/R, GL, Payroll), inventory, purchasing, sales, manufacturing (bill-of-materials and job costing), and reporting modules. Assisted with pre-sale support, requirement analysis, functional designs, and implementation. Expert for system level issues and both customer and in-house technical support.

**Plaskolite, Inc.**

Columbus, OH

**Manager of Information Services**

1990–1991

Led a team of four developer/analysts and two operators for a plastics manufacturer and distributor in Columbus, OH. Oversaw and facilitated the implementation of a real-time inventory control system. Hired two additional analysts to focus on the new system.

Annual sales of \$50 million. Controlled the departmental budget of \$600,000.

*Achievements:*

- New inventory control system installed.
- With new system, audited physical inventory accomplished in one day with 250 man#hours labor and no lost shipping

time compared to prior years 700+ man#hours, at least two lost shipping days, and up to two weeks to complete the audit.

## **Raytheon, Inc.**

### **Member of Technical Staff**

Sudbury, MA

June 1987–June 1989

Part of a three-person team responsible for the detailed design; implementation; unit, system, and acceptance testing; configuration; and documentation of an air traffic control subsystem. Helped to define the internal standards for using a CASE tool to capture and document the detailed design of a weather radar project.

## **Information Technology Skills**

---

*Languages and Applications:* Ruby (12 yrs), Rails (12 yrs), Perl (10 yrs), C (rusty-expert; 23 yrs), SQL (PostgreSQL, MySQL, Oracle, Sybase; 25 yrs), Bourne/Korn/POSIX Shell scripting (expert), Emacs-Lisp (32 yrs), MQSeries (MQI, 4 yrs; Administration 3 yrs), Java (3 yrs), CLU (OO predecessor of Ruby, Ada, and others).

*Operating Systems:* Unix (Mac OS X, Ubuntu, Linux) (expert).

*General:* Debugging, Testing, Protocol Troubleshooting, Design, Desktop Applications (Pages, Keynote; OpenOffice; Word, Excel, PowerPoint, Project).

*Miscellaneous:* Editing tools (Emacs, vi, awk, sed), Source Code Management (Git, Subversion, CVS, RCS, SCCS, PVCS Dimensions, PVCS Version Manager), Build Tools (Rake, Ant, Make), Web (HTML5, CSS3, JavaScript, XML).

## **Continual Education**

---

### **Scrum Alliance, Inc. (web)**

**Certified Scrum Professional® (CSP), 2016**

*Additional Certifications:* Certified Scrum Developer® (CSD) (2014); Certified ScrumMaster® (CSM) (2014).

### **Conferences**

*Attended:* RailsConf – The International Rails Conference (2006–Chicago, IL; 2007–Portland, OR; 2008–Portland, OR; 2009–Las Vegas, NV); RubyConf – International Ruby Conference (2006–Denver, CO; 2007–Charlotte, NC; 2008–Orlando, FL; 2009–San Francisco, CA; 2016–Cincinnati, OH); No Fluff Just Stuff – Southern Ohio Java Software Symposium (2004, 2005, 2006; Cincinnati); RFID Journal Live! (2004, Chicago); Web Site Development and Design (2002, CompuMaster); Distribution/Computer Expo (2001, Chicago); ScanTech (1999, Chicago); ID Expo (1991); CUBE (Unisys users) (1990, Nashville).

### **Continuing Education**

*Classroom:* Presenting Data and Information: A One-Day Course Taught by Edward Tufte (2006, Graphics Press LLC); Understanding Sexual Harrassment (2004, Logistics Division, Gap Inc.); Java Server Pages (2003, ITCourseware); Java Servlets (2003, ITCourseware); Java Programming (2003, ITCourseware); Identifying and Confirming User requirements (2001, Learning Tree); Consulting Skills for the Information Processing Professional (2000, Ouellette & Associates); Strengthening the IT / Client Relationship (2000, Ouellette & Associates); Active Communicating (1999); Project Risk Management (1998, Learning Tree); MQSeries Application Programming (1997, Level 8 Systems); Introduction to SQL and PL/SQL (1996, Oracle); Software Unit Test Workshop (1989, AT&T Bell Labs); Unix Internals I: Files and Processes (1989, Northeastern University); Radar Technology (1988, Raytheon).

*Online:* Scalability and the Real Time Information Network (2002, SeeBeyond); CSS Level 2 (2002, WestCiv.com); CSS Level 1 (2002, WestCiv.com); HTML & XHTML (2002, WestCiv.com).

### **American Production and Inventory Control Society (APICS)**

**Certified in Integrated Resource Management (CIRM), 1993**

## **User Groups**

---

Cincinnati Ruby Brigade

November 2008–Present

A meeting of users dedicated to the Ruby programming language as practitioners and mentors.

Agile Alliance

May 2006–April 2007

The Agile Alliance is a non-profit organization that supports individuals and organizations who use agile approaches to develop software. Driven by the simple priorities articulated in the Manifesto for Agile Software Development, agile

development approaches deliver value to organizations and end users faster and with higher quality.

Columbus Ruby Brigade  
March 2006–May 2009

A meeting of users dedicated to the Ruby programming language. (Only occasional attendance since November, 2008.)

Cincinnati Agile Round Table (formerly XP Cincinnati)  
October 2002–November 2011

A hands-on meeting to explore agile development methods, discuss current events, and share experiences with new software, programming languages, and techniques.

Cincinnati Java Users Group (CinJUG)  
April 2002–August 2005

## **Volunteer Boards and Activities**

---

### **President**

Countryside YMCA Torpedoes Swim Team  
September 2005–August 2010

The Booster Board works with the YMCA Aquatics department and the coaching staff to manage much of the administrative tasks related to the operation of a swim team having approximately 215 swimmers from 150 families.

### **Webmaster**

Countryside YMCA Torpedoes Swim Team  
March 2002–October 2011

<http://www.cytorpedoes.com/>

### **YMCA Swim Official**

Southwest Ohio YMCA Swim League  
September 2001–May 2011

### **OHSAA Swimming & Diving Official**

Ohio High School Athletic Association  
September 2007–June 2011

### **Trustee 2004–2006**

Gavia Scuba Club  
September 2003–Present

Editor of the club newsletter beginning in February, 2005.

### **Vice-President**

Lakeview Estates Home Owners Association  
April 2002–April 2006

Lakeview Estates is a 47 house development in Deerfield Township, Ohio.

Copyright © 2005-2017 by Robert A. Biedenharn.

Some Rights Reserved. This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/3.0/us/>

Last modified 19 April 2017.