

# ROBERT P. CHURCHILL, CBAP, PMP

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## **BUSINESS PROCESS ANALYST / PRODUCT OWNER / SOLUTION ARCHITECT**

Exceptional process analyst who has completed software development, analysis, architecture, simulation, modeling, control system, and process improvement efforts at over 80 facilities worldwide. Applies deep analytical skills to understand, map, quantify, and document complex operations and define governing equations. Applies communication skills to work with customers and technical teams. Builds models, analyzes business rules, and helps identify, negotiate, and define project requirements. Applies software engineering skills to develop, manage, and deliver robust and efficient solutions in multiple industries.

### **Core Competencies / Management & Analysis**

Systems Analysis	Process Discovery	Requirements Engineering
Domain Knowledge Acquisition	Data Collection and Analysis	Subject Matter Expert Interviews
Business Process Reengineering	Operations Research	Internal and External Consulting
SDLC / Scrum / Agile / Waterfall	Process Improvement	Project/Program Management
Monte Carlo Analysis	Reliability Engineering	Process Mapping
Documenting As-Is / To-Be States	Six Sigma Analysis (Quality)	Lean Analysis (Throughput)

### **Certifications**

Certified Business Analysis Professional (CBAP) #CBAP48092

Project Management Professional (PMP) #1284485

Certified Scrum Master, Certified Scrum Product Owner, Certified Scrum Developer (Scrum Alliance)

~~Certified Lean Six Sigma Black Belt (CLSSBB) #VIL020684 (lapsed Jan 2018)~~

### **Software Engineering**

System Architecture	Multi-Tier & Web Architecture	Inter-Process Communication
Real-Time Computing	Industrial Control Systems	Computer Simulation
Interactive Computer Graphics	User Interface Design	Testing / V&V / Acceptance

**Languages:** C/C++, JavaScript, HTML/CSS, PHP, MySQL, Java, SQL, FORTRAN, Pascal/Delphi, SLX, FileNet WorkFlow

**Office:** Word, Excel, PowerPoint, Visio, Project, SharePoint, Basecamp, Jira, Confluence

### **Experience**

**Independent Developer and Process Analyst** - Kensington, MD 2015–Present

#### ***Web and Simulation Developer, Business Analyst***

Refreshed and extended development, analysis, communication, and leadership skills through research, courses, books, meetups, Scrum and CBAP certifications, and website at [rpchurchill.com](http://rpchurchill.com).

- Created and edited questions for [AdaptiveUS](http://AdaptiveUS) business analysis training website.
- Learned JavaScript, Java, PHP, MySQL, HTML/CSS, Node.js, and numerous development tools.

**RTR Technologies, LLC** (split from Regal) – Aberdeen, MD, Lexington Park, MD 2002-2015

**Regal Decision Systems, Inc.** - Baltimore (Linthicum), MD, Lexington Park, MD

#### ***Operations Research Analyst, Project/Program Manager, Scrum Product Owner***

Performed management, design, analysis, data collection, presentation, documentation, and software engineering functions for process simulations in the United States, Canada, and Mexico.

Served as project manager for multiple analysis and development efforts and program manager for several logistics task orders: \$4.7M/year, 35 employees, 3 subcontractors, and a satellite office.

- All activities supported improved efficiency, cost, reliability, maintainability, robustness, and speed.
- Became expert in operations research and discrete-event simulation tools and techniques.
- Analyzed aircraft logistics support operations as part of team using the largest GPSS/H discrete-event simulation model ever written and additional ad hoc techniques.
- Performed full-scope Verification and Validation (V&V) of software system designed to manage entire fleet of Navy and Marine Corps F-18 series aircraft per MIL-STD-3022.
- Performed Analysis of Alternatives (AoA), Cost-Benefit Analysis (CBA) of high-volume processes.
- Reverse-engineered and specified redesign of major agency staffing model (27,000 staff, 100+ activities, 500+ locations) to improve accuracy and clarity, and incorporate business rules.
- Designed and built 3D pedestrian ingress/egress simulations with agent and threat behaviors.
- Built and used tools to simulate land border crossings on both sides of both United States borders.
- Created Medical Office Simulation tool to analyze and streamline operations in medical practices.

- American Auto-Matrix** - Pittsburgh, PA 2000–2002  
**Senior Software Developer**  
 Worked with HVAC controller products and supervisory control software.
- Updated PC-based driver software and created installers for multiple MS operating systems.
  - Managed software releases and version control.
  - Ran technical support web forum for direct customers.
- Bricmont, Inc. (later acquired by Andritz)** - Pittsburgh, PA 1994–2000  
**Manager of Level 2 Projects, Software Engineer, Control Systems Engineer**  
 Designed, implemented, and serviced Level 2 model-predictive supervisory temperature control and material handling systems for steel reheat and induction melting furnaces worldwide.
- Completely re-architected and re-implemented Level 2 supervisory control software. Migrated department to faster/cheaper systems and introduced new development tools.
  - Systems featured 1D and 2D real-time finite element thermal simulations, 2D and 3D GUIs, communications with other processes, and archiving and display of historical data.
  - Systems improved steel quality and saved 10%+ on fuel costs.
  - Commissioned numerous systems (of up to 50,000 custom lines of code) in the United States, Canada, Mexico, South Korea, and Thailand, and served as on-site service representative.
- CIScorp (Corporate Information Systems, Inc.)** - Pittsburgh, PA 1993–1994  
**Project Coordinator, FileNet Imaging Programmer**  
 Performed data collection and analysis of business processes leading to design and implementation of FileNet document imaging systems for business process re-engineering projects embodying existing business rules.
- Benefits included improved time service and accuracy, and cost savings of over 30%.
  - Business processes ranged from the overtime pay reporting for an engineering business unit to the entire disability insurance underwriting department at a major insurance company.
- Micro Control Systems (contracted through IMC International)** - Pittsburgh, PA 1993  
**Control Systems Engineer**  
 Updated database and user interface of control system for soaking pits and reheat furnaces.
- Westinghouse (contracted through IMC International)** - Pittsburgh, PA 1989–1992  
**Thermo-Hydraulic Simulation Engineer**  
 Designed and implemented software to simulate fluid systems in full scope, real-time BWR and PWR nuclear power plant training simulators on multi-processor distributed architectures.
- Models ranged from single-phase, single component systems to complex, multi-phase, multi-component systems and included interactions with physical control panels, instruments, and surrounding environments.
  - Created system to build model constants, interfaces, and documentation from acquired data.
  - Built PC-based software simulation framework to develop and test concepts to be implemented on the delivered system.
- Sprout-Bauer (later acquired by Andritz)** - Muncy, PA 1988–1989  
**Process Engineer**  
 Performed and documented detailed heat and material balances. Created flow diagrams and instrumentation schemes for several types of mechanical pulping systems.
- Performed quality and operational audits at paper mills in the United States and Canada.
  - Recommended process improvements.
  - Assisted in start-up and troubleshooting of instrumentation and process equipment.
- Military Service**
- United States Army** - Fort Bliss, El Paso, TX 1984–1988  
**Air Defense Artillery**
- Education**
- Carnegie Mellon University** - Pittsburgh, PA 1984  
**Bachelor of Science – Mechanical Engineering**  
 Added concentration in computer science, real-time computing, and computer graphics