

# Brooke Nielsen

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## Summary

My various Architect roles are characterized by technical leadership and a commitment to innovative enterprise and direct-to-consumer solutions. Over the past decades, I have successfully delivered interoperable service architectures, including an in-house loyalty platform and seamless integrations across diverse commerce systems and cloud platforms.

Leveraging my expertise in global commerce and modern design, I've played a pivotal role in improving roadmap delivery. My dedication to strategic execution is aimed at driving business value while reducing complexity through cutting-edge solutions.

## Experience



### **Solution Architect, Global Commerce, Loyalty, Integrations**

Levi Strauss & Co.

Sep 2013 - Present (10 years 11 months)

Technical leadership for a global team, responsible for architecture, implementation, performance and releases.

Worked closely with the business to understand the needs, proposed technical solutions, created and presented diagrams to stakeholders, broke down scope into deliverables, estimated and coordinated implementation tasks among multiple teams, reviewed artifacts and when possible contributed code.

Built in-house loyalty platform, supporting points and benefits based models with real-time interfaces to POS, App, and eCom. Orchestrated integrations between AI/ML, SAP commerce (hybris), mulesoft, azure/okta IAM, Manhattan order mgmt (OMS), Aurora/Mongo DB, AWS, GDO and multiple point-of-sale and email service provider systems.

Full stack implementation of levi.com and dockers.com on the SAP hybris commerce platform for EU and NA markets. Developed 3rd party payment integrations for the website, App, OMS with Apple Pay, Google Pay, Paypal, Venmo, Cybersource and Adyen supporting varying regulations in different markets. Worked on Avalara tax, customized promotions, and impersonation interfaces for CSRs.

Built in-store applications for associates to place eCom orders for out of stock variants, mobile point of sale app, and implemented a store kiosk customer app for individualized loyalty benefits and experiences at that location.

Helped with major data migrations and upgrades; Dockers to shopify, Levi's upgrades from hybris v4 on-prem all the way to Azure SAP Commerce Cloud v2211. Evolved the IT organization from vendor management to mature agile internal teams with solid CI, release mgmt and blue green deployments.

Recognized by Chip (then CEO) for a quick technical solution (within 1 week) that allowed the company to globally transition all in-store operations to a "Buy Online Pickup At Store (Curb)" model.



## **Sr Solution Architect & Implementations**

### **Arvato Systems**

Oct 2011 - Sep 2013 (2 years)

Provided technical solutions, strategy, recommendations and custom implementations for Arvato's clients.

Levi's Project: Architect role. Oversight of 3 development teams (21 developers total) in the planning, execution and delivery for US Levi's online sales on the hybris platform.

ABBConcise Project: Architect and Team lead role. Managed a team of 7 developers in the implementation of a customized B2B solution enabling Eye Care Providers to quickly replenish onhand stock and place customized patient orders for contact lenses and eyeglasses. Provided mentoring to team, enforced software development standards and legal compliance, defined patterns for implementation. Contributed code while working closely with the development team on tasks, scheduling/timelines, and quality. Introduced full front end test-case automation to the continuous delivery suite.

Novation Project: Developed a supply contract system on Hybris to manage distributor products, member and contract specific pricing and tiers for Novation's 30k members. Developed web services for members to upload and maintain large volumes of data, validation routines, and customized data exports to existing systems. Worked on data migration programs to extract and load existing data into Hybris. Integrated monitoring and performance tooling into system to alert operations when application resources approach critical thresholds that would impact user experience.

Gymboree Project: Development role, focused on a design and implementation of a custom Order Management System.

Performance Project: Load testing and tuning for an existing eCom solution to meet peak demand ahead of a client's product being promoted on a popular morning show.

Pre-sales: Quickly delivered proof of concept implementations for many prospective clients to showcase capabilities of proposed solutions. Technically led multiple discovery workshops.



## **Solution Architect - Product Content Management**

### **Procter & Gamble**

Feb 2011 - Oct 2011 (9 months)

Architected and led implementation team on a custom product content management solution on Hybris Platform for product and media maintenance in Europe, Middle East and Asian markets, allowing flexible categorization, versioning and localization of content.

Customized Hybris building a user friendly product data and media import process utilizing JSR validation framework. Implemented Hybris security and custom synchronization for content upload, review, approval, promotion to other catalogs, and finally delivery to eRetailers. Extensive customization of product cockpit.

Built automated feeds out of Hybris for pushing localized and approved content to eRetailer websites internationally including Amazon, TaoBao and Brandbank.



## **Head of Development, Hybris eCommerce Solution**

Deluxe

Jul 2010 - Jan 2011 (7 months)

Oversight of development efforts across multi-vendor teams including onshore and offshore resources in disparate locations.

Extended hybris shopping cart/ordering code to integrate with external systems including: shipping calculation, tax service, payment authorization, order fulfillment and status. Enhanced Hybris product catalog to allow for user customization including entering and validation of bank account data for variant products such as checks.



## **Enterprise Software Architecture, Technical Oversight**

3M

Apr 2008 - Jun 2010 (2 years 3 months)

Software architecture, design, programming and auditing of custom solutions for varying business units.

Worked on Corporate SOA initiatives and governance. Created reference implementation of the CGWM system in Websphere Integration Developer (WID) using BPEL.

Developed a Java EE architecture and initial implementation for a web-based workflow application to assist the Commercial Graphics division with managing their projects for the large-format graphics market. Application code interacted with enterprise systems via MQ, IIOP, and web services.

Built EDI interfaces for employee store sales accounting to backend systems.

Reverse engineered complex PL/1 accounting routines to extract requirements, architect and program Java replacement to process millions of dollars in financial data. Application accounted for and reported top line sales to 3M financials; interfacing with general ledger, ordering and pricing engines and data warehousing. Examined existing business processes and proposed improvements to meet project ROI objectives. Collaborated with business units to create consensus on changing business processes, and spearheaded efforts to implement the infrastructure improvements needed.

Evaluated existing implementations and specified candidate architectures for large external distributor interactions with 3M. Defined pricing, ordering, POS tracking to improve integrations between systems. Contributed maturity evaluations and technical expertise on the distributor platform roadmap at the mgmt level.

Established a new development team utilizing 3M employees in China. Responsible for technical oversight, agile dev processes, code reviews, audits and mentoring.

Created use cases, produced diagrams, held business requirements meetings, evaluated processes, defined risks.



## **Software Architect/Sr Programmer, Websphere Solutions**

## United States Postal Service

Jul 2004 - Apr 2008 (3 years 10 months)

Architect, Lead programmer of a several enterprise implementations. Projects including: Custom accounts payable app, big data mail statistical analysis systems, skills assessment testing and national scheduling systems for statistical mail sampling.

Architect, Programmer of a web based accounts payable application for internal accountants. The business drivers for the new system include Sarbanes-Oxley, legacy system retirement, improved process flow, security redesign as well as usability enhancements. The system is responsible for the entry and processing of billions of dollars in electronic and check-based financial transactions. The application code interacts with the federal reserve bank, taxing authorities, internal finance and budget applications, payroll, human resources and generates 1099 statements at year end for the recipients of taxable payments processed through the application.

Technical lead of web-based application on Originating / Destinating mail statistics. Programmed advanced statistical analysis to determine current and historic mail volume and revenue, logistical inefficiencies, and projections on future mail characteristics. Used by Postal executives in "rate cases" to Congress and by plants to determine rail/air/truck distribution needs. Architected replacement for mainframe application, mentoring staff, working with operations, executives, distribution plant managers and other stakeholders. Reduced program runtime from hours-to-days on the mainframe to seconds-to-minutes using advanced optimization techniques with J2EE, EJB, Websphere, DB2, JMS / MQ.

Created WebSphere automation scripts that interact with version control, build environment configurations, and WAS to automate builds, versioning and deployment of application code.

## Sr. Software Engineer PEO STRI

G2SS / Anteon / Department of Defense

2003 - 2004 (1 year)

Analysis, design and implementation of real-time electronic battlefield software for the Department of Defense. Worked on DMPRC which is used for live-fire training and testing of armor, infantry and aviation crews, sections, squads and platoons on skills necessary to detect, identify, engage and defeat stationary and moving infantry and armor targets in a tactical array. My project incorporated digital information systems to improve safety measures, training quality and metrics.

Technical contributions and presentations during onsite workshops at Fort Hood, for gathering requirements and communication with project sponsors.

Reverse engineered tank communication software and built a version in Java to function identically. Designed and programmed command and control center communication and messaging, along with the integrations to aerial vehicles and ground assets (Abrams and Bradleys.)

Coded situational awareness display; a real-time map user interface with up-to-date positions of aerial assets, soldiers, tanks, turret positions, blue forces and target statuses.

Secret security clearance issued by the Department of Defense.

[https://www.army.mil/article/62226/digital\\_multi\\_purpose\\_range\\_complex\\_complete\\_ready\\_to\\_roll](https://www.army.mil/article/62226/digital_multi_purpose_range_complex_complete_ready_to_roll)



## **Websphere Mentor**

United States Postal Service

2001 - 2003 (2 years)

Responsible for leadership and design of metered-mail application. Training and mentoring team of mainframe programmers in WebSphere, java, UNIX and Object Oriented Application Development.

Directed and mentored staff to develop skills to program replacement for legacy Cobol-based application with a secure web solution for the processing and auditing of every piece of metered-mail delivered in the country.

Creation of training material with instruction to a group and on an individual basis.

Planned and performed upgrade from WebSphere Application Server v3.0 to v3.5.



## **Technical Consultant Project Lead**

Lemon Grove School District

2002 - 2003 (1 year)

Managed the efforts for implementing part of Microsoft's Technology Challenge grant for k-12 innovation. The business drivers of the project are to provide technology in the classroom, in the home, and in the hands of every child, and family in the school district.

Led myEPack project, an online directory management and homework assignment and submission system for Lemon Grove students, teachers and staff.

## **Co-Founder/ Chief Technology Officer**

Medremedy LLC

2000 - 2003 (3 years)

Partnered with a Pharmacist to develop prescription drug fulfillment systems to address common errors in prescribing, fulfilling and distributing medications to patients.

Designed system and rules engine to securely track prescriptions, scan for deadly interactions and create a rule driven schedule of ideal times each medication should be administered for limited side effects and optimal treatment. Built automation routines to construct rules by parsing pharmaceutical drug information databases.



## **Senior Software Engineer, B2B eCommerce Solutions**

Deluxe

1999 - 2001 (2 years)

Sr Developer of eCommerce solutions for Deluxe Business Forms. Responsible for estimating project efforts, architecture/detailed design, implementation, mentoring Jr. programmers, configuration and release management.

Worked on a web-based ordering and customization system for business checks and forms, order fulfillment, order tracking, real time image rendering of proofs, and XML data exchanges between suppliers.



## **Team Lead / Sr Software Engineer**

University of Minnesota

1997 - 1999 (2 years)

Technical leadership for a team of student and staff programmers. Programming of Java application code to provide all University student services via the web including course registration, scheduling, transcripts and grades. Working with U departments to define scope, design and integration details.

Developed Java code that performed transactions through PeopleSoft using the PeopleSoft Message Agent and JDBC to Oracle through a servlet generated user interface.

System administration of UNIX development box, OS upgrades, patches, and sendmail listgroup management.

## **Software Engineer**

Ulysses Telemedia

1996 - 1997 (1 year)

Lead developer of large scale software development primarily in java. Applications include intranet groupware, foundation classes, and applications aimed at the network computer.

Original designer and developer of Sperios, a desktop and windowing environment written in java and deployed on the network computer.

Primary developer of the Odyssey Software Suite. Web-based groupware written in perl and c, including a calendar, personal contact manager and a reminder system

Complete systems integration for sun and sgi system networks. Set up and configure routers, csu/dsu, and hubs. Build and install software including sendmail 8.6.1/8.7.5, dns setup and administration, usenet news, web server with multiple virtual domain hosting. Performed hardware upgrades.



## **Applications Programmer / Unix Sysadmin**

University of Minnesota

1994 - 1996 (2 years)

Unix system administrator for University email, directory and student/staff account machines.

Responsibilities included system security, patches and upgrades, software builds, Perl/sh scripting and configuration on 5 Sun Solaris boxes for a user base of over 70,000 accounts.

Additional work included web-related programming involving large data exchanges between many departments including standard CGI utilities, custom database development, and user interface design.

## **Education**



### **University of Minnesota**

Master of Science - MS, Software Engineering

1998 - 2000

Publications:

- Simulation of polyethylene oxide: Improved structure using better models for hydrogen and flexible walls; Journal of Chemical Physics · Aug 22, 2001
- Numerical Studies of Fluids and Disordered Solids; University of Minnesota Supercomputing Institute · Nov 1, 2000
- Numerical Studies of Particles and Fluids in Astrophysics; University of Minnesota Supercomputing Institute · Dec 1, 1999
- Simulation of Amorphous Polyethylene Oxide: Including Hydrogen in a United Atom Model; University of Minnesota Supercomputing Institute Research Report · Apr 1, 1999
- Atomic Structure of Solid and Liquid Polyethylene Oxide; Journal of Chemical Physics · Oct 22, 1998



## **University of Minnesota**

Bachelor of Science - BS, Astrophysics

Research Assistant Positions:

- Cosmic Ray lab: Studied microscopic plates of gold particles accelerated to 12GeV thru a photographic emulsion, calculating mean free path to collision and resulting particle characteristics.
- Digitizing palomar sky survey, creating one of the first online star catalogues.
- Computing lab, all around assistance to other students on assignments, software, and unix commands.

## **Licenses & Certifications**



**hybris Core Platform Certification - SAP**



**hybris Commerce Certification - SAP**