Sylvain Leroy

SOFTWARE MODERNIZATION ARCHITECT

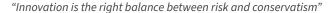*Chemin de Bérée 16B, Lausanne, Switzerland*

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"Innovation is the right balance between risk and conservatism"

Key Points

- **Architect and consultant** specialized in information system migration issues and digital transformation.

- **14 years** involved in architecture design, architecture review, transformation projects.

- Founder of a company specialized in Software Architecture Assessment and Legacy software modernization (Tocea)

- Participated as an Architect for the bank transformation project in **Azqore** (Integration with a new Cobol middleware)

- Worked a Solution Architect / Techlead consultat for **HSBC** around a Private Banking Middleware project.

- Worked as a Consultant for several Banks, Insurances, Vendor, Industries.

- Familiar with different technologies and architectures (from Mainframe to Modern architectures)

- Recognized in Switzerland for my ability to help IT teams to **organize and perform modernization of their legacy software**.

- Still, an experienced developer and recognized Software Craftsman coach.

Education

AWS SOLUTION ARCHITECT ASSOCIATE CERTIFICATION		*Online*
PEARSON		*2023*
AWS SYSOPS ASSOCIATE CERTIFICATION		*Online*
PEARSON		*2023*
INTRODUCTION TO IBMI/RPG LANGUAGE		*Online*
METRIXWARE		*Jan 2021*
ANGULAR 2 TRAINING		*Geneve*
NINJA SQUAD		*Jan 2017*
INTRODUCTION TO COBOL AND 3270		*Nanterre*
METRIXWARE		*2015*
STATIC ANALYSIS AND REFACTORING TOOLS, RESEARCH PROJECT		*Rennes*
INRIA/IRISA		*Jun 2007-2010*
PERFORMANCE AND MICRO ARCHITECTURE, MASTER'S PROGRAM		*Rennes*
UNIVERSITY OF RENNES 1		*Sep 2004-Jun 2007*
BACHELOR OF COMPUTER SCIENCES		*Rennes*
UNIVERSITY OF RENNES 1		*Sep 2002-Jun 2004*

Experience

SOLUTION ARCHITECT AND SOFTWARE MODERNIZATION

CONSULTANT

<div align="right">Switzerland
September 20179 - June 2021</div>

Keyteo - Assura

<div align="right">Technical Leader
March 2021 - September 2021</div>

CONTEXT
- 100+ staff project
- Team 15 people, 1 architects, 2 Techleads, devs / analysts
- Flat hierarchy environment
- Core ERP migration from AS400 to Adcubum Syrius solution

ACHIEVEMENTS
- Functional/Technical specifications, Architecture and Software Design
- Software quality control and best practices
- Agile/Scrum environment

TECHNOLOGIES
- *TIBCO* : REST/SOAP environment, Java language

SOLUTION ARCHITECT AND SOFTWARE MODERNIZATION

CONSULTANT

<div align="right">Switzerland
Jan 2017 - March 2021</div>

SALT SA

<div align="right">SOLUTION ARCHITECT
March 2020 - March 2021</div>

CONTEXT
- IT Team 30 people, 5 architects, 25 devs / analysts
- Flat hierarchy environment
- Near-shoring in France (15 people)
- 4 Backends, 2 UI had to be migrated from Spring 2/Java 5 to Spring 5, Java 11 using Hexagonal Architecture
- Central payment system : 5 software, one 3rd party provider (Datatrans)
- 3 allocated people + Project manager

ACHIEVEMENTS
- Prepare a technological roadmap and execute the modernization of the Payment system
- One year project, to perform much everything on our own; (automated tests, non-regression, software modernization plus 1 UI rebuilt from scratch)
- Reverse engineering of the legacy system to allow later improvements
- Coached and trained junior developers.

TECHNOLOGIES
- *Java Backend migration* : Java 6/Open JPA -> Java 11/Spring Boot/Data
- *Frontend/Backend migration* : Groovy/Play migration : Play Framework -> Spring Boot/MVC/Thymeleaf
- *Frontend migration* : GWT -> SPA/Typescript/Webpack/JQuery
- *Automated testing* : Junit 5, Cucumber, Selenium

La Mobilière

Software Modernization Architect
September 2019 - March 2020

CONTEXT
- Fixed-term employment contract
- Project Migration of 3 Legacy JBOSS/JSF Applications to Jboss 7.2
- Project LCM on existing systems
- Large organization in SAFE: 200 people
- Totally new team dedicated to this project: 7 people
- Time-constrained modernization
- Reverse-engineering and technology architecture impact analysis

ACHIEVEMENTS
- Migration, modernization, and QA performed on time and budget
- Excellent feedback from the stakeholders
- Frequent architecture discussions with the local architecture team

TECHNOLOGIES
- *Java Backend migration*: JBOSS 6.4->7.2, Java 6 to Java 11 Migration, Spring upgrade, Hibernate Upgrade and JBOSS Drools upgrade
- *Frontend migration*: Replace Primefaces with the the latest version
- *Java Backend migration*: Java 8 to Java 11 Migration, Spring upgrade, Hibernate Upgrade and JBOSS Drools upgrade
- *Automated testing*: Junit 4, Cucumber
- *Methodology*: SAFE, SCRUM

FAVEEO SA

CTO/AWS/Cloud Solution Architect
August 2018 - August 2019

CONTEXT
- Small Organization Environment
- Personal challenge to bring innovation
- Principal Architect, Lead Dev
- OKR/KPI oriented organization with strong budget and business incentives
- Multi-cultural environement

ACHIEVEMENTS
- `https://essentials.news`
- `https://sylvainleroy.com/upload/videoscript-7fc1ccef88.mp4`
- Architecture Design and development of an innovative **AI prediction system** to detect future viral newspaper articles
- Architecture Design and development of an innovative system to generate Video using newspaper articles and AI
- Architecture Design an Automated AI generated mailing using Mailchimp, Elasticsearch and Java 11
- Achieved the technological and innovation goals for the company.

TECHNOLOGIES
- Event Architecture, Pipeline, Messaging using RabbitMQ
- Java, Spring Boot, DeepLearning4j, Smile, Docker
- Vue.js, Spring Boot, RabbitMQ; Docker, MongoDB, Elasticsearch, OpenNLP
- Pure Cloud Player : AWS Environment
- Mail generation system using Node.JS, Java 8, Spring Boot and Mailchimp

GHI, GSK, HSBC

Solution Architect, Tech Lead
September 2019 - March 2020

CONTEXT
- 3 Projects, two offsite, one onsite
- Generally in Scrum/Agile teams
- Architect role directly with the GSK/Novartis Upper Architecture management
- Solution Architect / Delivery control in a complex delivery environment for HSBC
- As Product Owners of the Bank Middleware system, really high stability and performance expected from the Architecture team
- Offshore with India and China : architecture, coaching, delivery, review, first level of technical support

ACHIEVEMENTS
- *1st Trimester 2017 - GHI*: Software Quality Assessment and Performance testing
- *2nd Trimester 2017 - GSK Novartis*: Modernization of the Drug Packaging system
- *TechTalk*: Speaker: "Why developers should care about quality ?"
- *HSBC Private Banking*: member of the Architecture/Middleware team: performed several deliveries and go live in a multicultural / distributed environment

TECHNOLOGIES
- *GHI*: Spring and Angular technologies, Okta authentication, JMeter and Gatling
- *GSK*: W4 Business engine, Docker, Jenkins, Oracle, Java, Javascript, JSP, Tomcat, Apache, Gradle, JIRA, Bamboo
- *HSBC*: Avaloq, Ansible, Jenkins, Spring, REST, SOAP, MQ, WebSphere

STAKEHOLDER AND CTO

Rennes, Nanterre

METRIXWARE/TOCEA

Jun. 2014 - Dec. 2016

CONTEXT
- Mergers between two companies (20 + 15 staff)
- Three sites : Paris, Rennes, Montreal
- Two very different cultures : 25 years, 50+ years
- Technology director for several product lines : Mainframe product, Software Factory product, DevOps product and Legacy Software migration products
- Principal Consultant for Key Accounts
- 50+ Active customer references France and International: insurances, banks, administrations, industries

ACHIEVEMENTS
- Creation of a profitable activity around Software Modernization consulting
- Built the renown of the company over Software Factory and Devops Expertise
- Increased the company renown for its Technology/Architecture Roadmap and Software Assessment
- Launched successfuly an KPI/DevOps Dashboard solution to track Devops initiative ROI
- Acquired a knowledge of the IBMz and IBMi challenges and integration issues with the Digital ecosystem
- *Software Modernization Project* Modernization program of the Swift Transfer Product for Fircosoft, Accuity
- *Software Modernization Project* Modernization program and transformation of the C/C++ Indexation Engine for SoLocal/Pages Jaunes
- *Software Modernization Project* Modernization program of 7 applications for INSEE
- *Software Modernization Project* Modernization program of core Logistic Product for SIGMA informatique
- *Software Modernization Project* Modernization program of the Orange's Webmail
- *Software Modernization Assessment* Architecture and Technology Roadmap for DGAC ministry
- *Software Modernization Assessment* State Council
- *Software Quality Assessment* Economy and Budget Ministry
- *Software Modernization Assessment* Canadian Promutuel
- *Software Quality Assessment and Postmortem* Delegated Software Quality Expert for the French Ministry of Environment
- *Digital Transformation Roadmap for AXA software built over IBMz* AXA
- *Software Modernization Assessment* C/C++ SEPA Payment system for Cedricom
- *IT Organization and Software Assessment* Campus France

TECHNOLOGIES
- Proprietary Modernization framework and tools
- Eclipse Modeling and Framework
- Java ecosystem

Cofounder and CTO TOCEA/Echoes Labs

Rennes, Quebec

TOCEA

Mar. 2011 - Jun. 2014

Context
- *Tocea is an innovating company that provides refactoring source-to-source solutions to help the software editor to refurbish their legacy software in record time and budget*
- Won the National Emerging Industry Innovation price in 2011 and 2012
- Built a team from 0 to 20, created a local branch in Montreal
- Technology director for two product lines : Software Quality Product and Software modernization product
- Principal Consultant for Key Accounts
- 50+ Active customer references France and International: insurances, banks, administrations, industries

Achievements
- *Architect*, main developer for a solution of Code Quality analysis, competitor of SonarQube
- *Contributor to SonarQube ecosystem* : development of a Saas solution for SonarQube to provide worldwide Quality benchmarks
- *DevOps Coach* for SoftAtHome company, 60 Developers, 20 QA
     Modernization of S@H Software Factory and build
     Test Automation coach, and Requirements analysis

Technologies
- Proprietary Modernization framework and tools
- Eclipse Modeling and Framework
- Java ecosystem

Research Engineer for SERENITEC(SEcurity, REfactoriNg, Internet, TEchnologies) Research Project

Rennes

INRIA/IRISA

Sep. 2007 - Sep. 2010

- **Main developer** of a new technology for the detection of **quality**, reliability and **security** problems in Web Applications
- Technical Lead of a research team (2 Phd, 2 Engineers)
- Code Qualimetry tool development : C/C++, Java

Skills

PROGRAMMING SKILLS

Programming Languages	Java 8,11+, JavaScript, TypeScript, Groovy
Web/UI	Vue.JS (vuex, vue-router), , Angular 8+, React-Native, Thymeleaf,JSF, Wicket
Frameworks	Spring Boot, Spring 5, CXF, MyBatis, Hibernate, Node.JS, Express, Loopback 3-4
Machine Learning	DeepLearning4j, Smile, Weka, KNime
Test Tools	Selenium, Puppeteer, SoapUI, Performance tooling, Cucumber, JBehave, JUnit 5/4, Mockito, Postman

☁ ARCHITECTURE SKILLS

Software Architecture	Cleancode, CQRS, DDD, Hexa/Clean Architectures, Microservices
Cloud	Terraform, Google Cloud (GCE, GKE, Pub/Sub, GCB, API), Amazon(S3, EC2, ECK, ECS, ELB, ECR, IAM)
SAAS Services	DataTrans, Google API, Mailchimp, Mailjet, Auth0, Stripe
Legacy Software migration	Cloud Software migration (Monoliths), Test Automation, 12 Factors, Source-to-source expert
Mainframe experience	**Cobol** (Code review), Java - Mainframe Integration (3270, Messaging)
Databases	MySQL/MariaDB, MongoDB, Elasticsearch, Neo4J, Sqlite, Oracle
Platform services	Tomcat, Varnish,RabbitMQ, ActiveMQ, JBOSS Keycloak, Apache2, JBOSS, HAProxy

SOFT SKILLS

Team management	20+ IT staff management, Product Owner, Roadmap, Agile/Kanban, SAFE, Scrum, Waterfall
Software Quality Assurance	ISO 9126, ISO 25000, Balanced scorecard, CMMI, KPI, COCOMO2
Quality Tools	SonarQube, Squale, Kiuwan, Codacy, Klocwork, Coverity + opensource
Innovation	Research promotion, Innovating ideas, Research project initiator
Languages	French (Natural), English (C1), German (A2), Russian (A1), Italian(Beginner)

Extracurricular Activity

FREELANCE   *France, Germany, Switzerland*

CONSULTANCY   *2020*

- Performance Audit for a Critical System of a Saas company
- *Software Modernization Project* Modernization program of Logistic Product for Nexter Military Equipment
- Design and development of an automated Adobe FLEX to Angular 8/9 conversion tool
- Design and development of an automated RPG4 to RPG 8 conversion tool
- Java 5 -> Java 11 Software Modernization for a Land Defense Leader in France and Europe

FREELANCE   *Switzerland*

DESIGN AND BUILD OF A MOBILE APPLICATION FOR A STARTUP PROJECT   *2019*

- Using React Native, backend Node.JS and Typescript

FREELANCE FOR THALÈS AVS   *France*

SOFTARE FACTORY AND DEVOPS AUDIT   *2019*

- Software SDLC and Factory audit for the Thalès AVS Group

OPENSOURCE DEVELOPER   *Switzerland*

SONARTSLINT, SONARESLINT PLUGIN   *PRESENT*

- Maintainer of the opensource SonarQube plugin SonarESLint.
- Contributor to some open-source projects.

HOBBIES

- Being a great father of 3 and a source of inspiration
- Hiking, Cycling, Cooking
- Learning Italian, Russian

Honors & Awards

INTERNATIONAL

2013	**Finalist**, Innovation award from the French Ministry of the Industry (Créadev)	*Paris, France*
2012	**Finalist**, Innovation award from the French Ministry of the Industry (Emergence)	*Paris, France*
2011	**Laureate**, Phar Fund laureate	*Rennes*

Presentation

Byoskill
KEY SPEAKER FOR THE SCALEUP 360 LEGACY IT EUROPE CONFERENCE

Switzerland

2020

- Big bang or iterative evolution : my hands-on experience.

Byoskill
CLEANCODE TRAINER

France

2019

- Coaching and training of new Cleancode trainers

OCTO
PRESENTER FOR OCTO

Lausanne

July. 2017

- Internal presentation : Why should we love our software ?

SERIAL
PRESENTER FOR SERIAL

Geneva

Apr. 2017

- Internal presentation : Why code quality does really matter ? How to boost your dev skills.

Metrixware : cross-company training
CLEANCODE TRAINER

France

2014-2016

- Cleancode course
- Design pattern course
- Automated testing course

Tocea : cross-company training
JAVA/SPRING TRAINER

France

2012

- Java best practices
- SOA Best practices
- Java software optimizations

AFDEL
PRESENTER FOR AFDEL/TECH IN France

Paris

Jul. 2012

- Diminuer sa dette technique : stratégie de migration ... - TECH IN France

INRIA Workshop
PRESENTER FOR INRIA WORKSHOP

Rennes

Sep. 2007

- Source-to-source technics for Java software optimizations

Writing

Blog Writer
DIGITAL TRANSFORMATION REFACTORING

Switzerland

Jan 2017 -Now

- Blog on various subjects : Code quality, refactoring, Enterprise Architecture, Digital Transformation
- `https://sylvainleroy.com`

Main Writer
SOFTWARE LEGACY: HOW TO SAVE THEM ?

France

Sep. 2016 - Dec. 2016

- WhitePaper on Software legacy and how to handle the technical debt

Main Writer
SOFTWARE REQUIREMENTS : A COMPLETE GUIDE AND MARKET STUDY

France

Sep. 2015 - Nov. 2015

- Exhaustive WhitePaper on Software requirement domain and requirement software market