Sylvain **Leroy**



SOftwarE MODErNiZatiON ArcHitEct

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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 software migration projects, tools and methods.
* Founder of a company specialized in legacy software modernisation (Tocea) and Software quality
* Carried out numerous assessments for Ministries, banks, insurance companies, software publishers…some with famous groups as Bear‑ ingPoint.
* Has been the CTO of a Software Editor that published solutions to modernize IBMz / IBMi
* Advised and participated in the bank transformation project for **Azqore** ( Integration with a new Cobol middleware)
* 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.
* Dedicated about the problems of handling legacy software since 2007

# Education

### 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

**LZLaBs GMBH** *Zurich, Switzerland*

TEaM LEaDEr

CONtExt

* LzLabs is a software company that develops innovative solutions for enterprise computing customers in‑ cluding its LzLabs Software Defined Mainframe
* Team 3 people
* Flat hierarchy environment
* 60+ developers
* Pre‑sales and Post‑sales interactions
* Customer facing position: requirements collect, trainings, workshops

AcHiEVEMENtS

* Product owner and technical leader of a product portfolio SCA: Source code analyzers for mainframe technologies

Workbench: Eclipse / VSCode IDE for Mainframe programmers with a full set of features Workbench Server: remote compilation / execution for Cobol/PLI programs

* DevOps architect: participating workshops, trainings of Mainframe users
* Coached and trained junior developers.

TEcHNOLOGiES

* *SCA*: Java, Compiler technologies (ANTLR, Regexp), JUnit, XML, Maven
* *Workbench*: Eclipse technologies (SWT, Java), HTTP Client, JUnit, Picocli, Maven
* *Workbench Server*: Spring Boot, Spring web, Spring authentication
* *LzTestManager*: GWT/ Spring / Spring Boot + Mainframe technologies

### SoluTioN archiTEcT aND SofTWarE MoDErNiZaTioN

CONSuLtaNt

*September 2021 ‑ current*

*Switzerland*

*September 20179 ‑ June 2021*

**KEYTEo ‑ assura** *Lausanne, Switzerland*

TEcHNicaL LEaDEr *March 2021 ‑ September 2021*

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

### SaLt Sa

*Renens, Switzerland*

SoLutioN ArcHitEct *March 2020 ‑ March 2021*

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 mod‑ ernization 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

### SErial Sa/ MoBiliÈrE

*Nyon, Switzerland*

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

CHiEf TEcHNoLoGicaL OfficEr

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://essentials.news/)
* <https://sylvainleroy.com/upload/videoscript-7fc1ccef88.mp4>
* Architecture Design and development of an innovative **AI prediction system** to detect future viral newspa‑ per 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

*Lausanne, Switzerland*

*August 2018 ‑ August 2019*

### aZQORE Sa / CrEDiT aGricolE

SoftwarE QuaLitY MaNaGEr, SoftwarE MoDErNiZatioN ArcHitEct

CoNtExt

* Hired as Software quality and architecture auditor to control every delivery (Cobol, Java, Mobile...)
* Worked under the Principal Architect and inside the Enterprise Architecture team: 5 people
* Unofficially requested as Solution / Modernization Architect on several projects
* Two different cultures : IBMz IT and Digital IT
* Inshore, nearshore(France), offshore(Singapour) developments
* Strict ISO process for Document and communications

AcHiEVEMENtS

* Architect role on the integration project of a Cobol middleware with Digital ecosystem.
* Intervened as a Solution Architect on critical production issues
* Mission with the Application Management to define and broadcast Application monitoring best practices
* Creation of a TechLead community inside the Bank
* Participated on some GDPR questions especially about system reverse engineering to secure customer data

TEcHNoLoGiES

* IBMz, Microfocus, IBM Websphere, IBM MQ
* Enterprise Architecture ARIS, Quality tools and Software Factory
* WSO2, ManageEngine AppManager, Dynatrace
* Java (JSF, Spring), Angular…

*Lausanne, Switzerland*

*December 2017 ‑ August 2018*

### SERIaL Sa

SoLutioN ArcHitEct, TEcH LEaD

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

*Geneva, Switzerland*

*January 2017 ‑ December 2017*

### MEtRIXWaRE/tOCEa

*Rennes, Nanterre*

StaKEHoLDEr aND CTO *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 prod‑ uct 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

### tOCEa

CofouNDEr aND CTO TOCEA/EcHoES LaBS

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

*Rennes, Quebec*

*Mar. 2011 ‑ Jun. 2014*

### INRIa/IRISa

*Rennes*

RESEarcH ENGiNEEr for SERENITEC(SEcuritY, REfactoriNG, INtErNEt, TEcHNoLoGiES) RESEarcH ProJEct *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**

REcENt SKiLLS

**Programming Languages** Java 8,11+, JavaScript, TypeScript, Groovy, Bash

**Web/UI** Vue.JS (vuex, vue‑router), Angular 8+, GWT, EJS

**Frameworks** Spring Boot, Spring 5, JPA, Hibernate, Nuxt.JS, Node.JS, Express

**test tools** Selenium, SoapUI, Cucumber, JUnit 5/4, Mockito, Postman

**Software architecture** Cleancode, CQRS, DDD, Hexa/Clean Architectures, Microservices, Archimate

**Cloud** Google Cloud (GCE, GKE, Pub/Sub, GCB, API)

**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** Oracle, PostgreSQL

**Platform services** Tomcat, Apache2, HAProxy

## ExPEriENcE

**Programming Languages** C/C++ (5 years), PHP (1 year), Kotlin(beginner)

**Web/UI** React‑Native, Thymeleaf,JSF, Wicket

**Frameworks** Struts, Loopback 3‑4

**Machine Learning** DeepLearning4j, Smile, Weka, KNime

**test tools** JMeter, Gatling

**Cloud** Terraform, Amazon(S3, EC2, ECK, ECS, ELB, ECR, IAM)

**SaaS Services** DataTrans, Google API, Mailchimp, Mailjet, Auth0, Stripe

**Databases** MySQL/MariaDB, MongoDB, Elasticsearch, Neo4J, Sqlite, Oracle

**Platform services** Varnish,RabbitMQ, ActiveMQ, JBOSS Keycloak, JBOSS

## 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

[**https://salaire-en-suisse.ch**](https://salaire-en-suisse.ch/)*Switzerland*

BuiLD a DEMo ProJEct for Nuxt;JS

* Using GCP, Nuxt.JS, Vue, Mongo

### FrEElaNcE

CoNSuLtaNcY

* Trainer (Gradle, JUnit, ...)
* 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

*2021*

*France, Germany, Switzerland*

*2020‑2022*

*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

* Software SDLC and Factory audit for the Thalès AVS Group

### OPENsourcE DEVEloPEr

SoNarTSLiNt, SoNarESLiNt PLuGiN

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

*2019*

*Switzerland*

*PRESENT*

### HoBBiEs

* Being a great father of 3 and an source of inspiration
* Hiking, Cycling, Cooking
* Relic hunter
* 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

* Big bang or iterative evolution : my hands‑on experience.

### BYosKill

ClEancoDE trainEr

* Coaching and training of new Cleancode trainers

*Switzerland*

*2020*

*France*

*2019*

**OCtO** *Lausanne*

PrESEntEr for OCTO *July. 2017*

* Internal presentation : Why should we love our software ?

### SERIaL

*Geneva*

PrESEntEr for SERIAL *Apr. 2017*

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

### METriXWarE : cross‑coMPaNY TraiNiNG

ClEancoDE trainEr

* Cleancode course
* Design pattern course
* Automated testing course

### tocEa : cross‑coMPaNY TraiNiNG

JaVa/SPrinG trainEr

* Java best practices
* SOA Best practices
* Java software optimizations

### aFDEL

PrESEntEr for AFDEL/TECH IN FrancE

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

### INRIa WorKshoP

PrESEntEr for INRIA WorKSHoP

* Source‑to‑source technics for Java software optimizations

*France*

*2014‑2016*

*France*

*2012*

*Paris*

*Jul. 2012*

*Rennes*

*Sep. 2007*

# Writing

### BloG WriTEr

DiGital TranSforMation REfactorinG

* Blog on various subjects : Code quality, refactoring, Enterprise Architecture, Digital Transformation
* [https://sylvainleroy.com](https://sylvainleroy.com/)

### MaiN WriTEr

*Switzerland*

*Jan 2017 ‑Now*

*France*

SoftwarE lEGacY: How to SaVE tHEM ? *Sep. 2016 ‑ Dec. 2016*

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

### MaiN WriTEr

*France*

SoftwarE rEQuirEMEntS : a coMPlEtE GuiDE anD MarKEt StuDY *Sep. 2015 ‑ Nov. 2015*

* Exhaustive WhitePaper on Software requirement domain and requirement software market