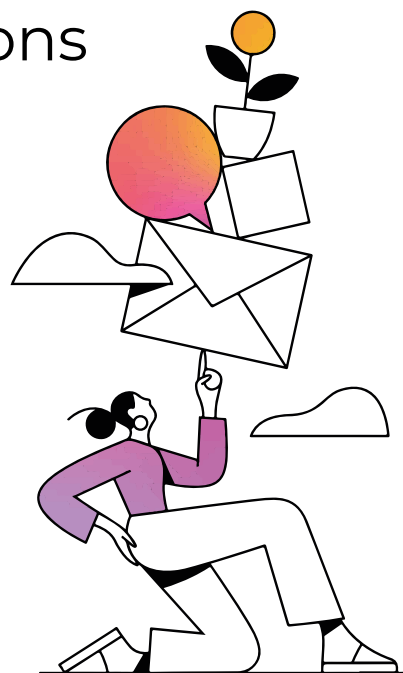# FNZ_

We are wealth's growth platform

Graduation Projects Book 2023

Core- to-digital Solutions for banking & Wealth Management

FNZ

We are wealth's growth platform

July 2022: New Access has been acquired by FNZ Group, the leading global wealth management platform! Through this transition, New Access will enhance the value of its delivery to financial institutions around the world, and accelerate the deployment of personalized and differentiated private banking and wealth management solutions.

Our Vision

Let's open up wealth together

We believe that wealth's potential is limitless, but legacy technology is holding it back. We've built a new foundation that unifies and modernizes a fragmented industry. This means we're making it possible for millions of new and existing investors, at all levels, to harness wealth's full potential to grow. We are opening up wealth by breaking down barriers that create complexity and friction. We are opening up wealth by creating modern, digital-first experiences for our customers and their investors. We are opening up wealth to make it more transparent and personalized for every investor. But above all, we are opening up wealth by giving people more freedom to invest in what matters to them. It's a vision we're making real through the collective efforts of our people, passion and technology.

New Access before

New Access is a leading provider of a scalable and modular Core-to-Digital software solution suite designed to meet the specific requirements of the Private Banking and Wealth Management industries. We enable digital transformation and improve client's satisfaction with our digital front-end solution, including an advisor cockpit, full client life cycle management (CLM) and a client/EAM portal. We support digital interactions with your clients and EAM, managing key business and compliance processes. We operate since 20 years exclusively in the private banking and wealth management sectors, supporting more than 55 customers globally.

FNZ Now

we are the leading global wealth management platform

- Over $1.5 in assets under administration
- More than 650 financial institutions
- More than 20 million end customers
- More than 4,500 employees in 21 countries
- More than 130 employees in Tunis
- Offers the possibility of international mobility

FNZ Tunisia

Current workforce: 135 – Mainly composed of 9 teams

Digital Solution

Back-end Dev team
> Technologies Used: C# .Net / SQL

Front-end Dev team
> Technologies Used: Angular/SQL/Java (Android)/Objective-C (iOS)

Core Banking Dev,DevOps & Reporting team
> Technologies Used: C/Java/SQL/Oracle/Perl/Unix/MS Access

Portfolio Management System Dev & Reporting team
> Technologies Used: C++/QT

Client Data Management Dev team
> Technologies Used: C++/Java/SQL

BI team   Technologies Used: SSAS, SSIS, SSRS & PowerBI

QA team   Technologies Used: TestComplete, JavaScript, Java, Unix Shell, ReadyAPI, Groovy

Client Services team
> Technologies Used: Machine learning, PHP, JavaScript

IT team   Technologies Used: PowerShell, SQL, Unix, Forti

The FNZ Way: Our values

Customer obsessed for the long-term

Think big and make an impact

Act now and own it all the way

Challenge, commit and win together

Department: Client Services

Graduation Project

Title: Implementation of a web application integrated with Zabbix, for products monitoring.

Description: The project aims to integrate automatic checks with Zabbix to obtain a solution that allows to:
- Monitor products.
- Guarantee rapid, immediate and automatic interventions on several types of issues.
- Detect and retrieve faulty information.
- Analyze incidents.
- Manage the availability of services/batches (Up/Down).
- Manage alerts, email notification in case of malfunction.
- Store service/batch failure history.
- Manage graphs.
- Get real-time visibility into all user accesses.

Keywords:

Supervision, statistics, analysis, performance, automation.

Technologies: Angular, Spring boot.

Project Duration: 4 to 6 months.

Department: Product Development

Graduation Project

Subject: The purpose of this project is to create a web application, for internal use in our company, to organize and optimize carpooling between employees whether with their private vehicles or with taxis, by sharing the costs.

The application integrates several user profiles depending on whether or not they have a vehicle, and according to their needs.

It also integrates an Artificial Intelligence engine that would make it possible to match users according to their routes/needs, as well as to optimize routes and save fuel as much as possible.

The project could be extended by adding an Android and iOS mobile application that connects to the website.

Technologies Used:
- C# .Net Core
- SQL server
- API Rest
- Angular 14
- Artificial Intelligence / Machine learning
- Mobile (optional) : Android/iOS

Department: Product Development

Graduation Project

Title: Design and Development of a Portfolio Shrinkage application.

Description: Portfolio shrinkage or compression is a method to reduce the number of cashflows in a portfolio or open Trades (and therefore their gross notional amounts) while maintaining the same economic exposure.

The purpose of this project is to develop a Web application that allows to manage the portfolios existing in the Core Banking, or the PMS, by adding the compression mechanism.

For that, it is necessary to:
- Study the different existing financial products.
- Prepare formulas that achieve the compression for each product.

Keywords: Portfolio management, Cashflow, Compression/Shrinkage.

Technologies: Spring Boot, Angular, SOAP, REST, Oracle.

Project Duration: 6 months.

Department: Product Development

Graduation Project

Title: Design and implementation of a smart investment proposal solution, for client portfolios.

Description:

The purpose of this project is to develop a Web application that automatically generates portfolio investment proposals according to one or more objectives selected by the client, while taking into consideration his history and history of other similar clients.

For that, it is necessary to:
- Analyze, understand and manipulate the portfolios that exist in the Core Banking and the PMS.
- Propose an architecture of the application by highlighting the machine learning part, which will be responsible of the generation of portfolio investment proposals.

Keywords: Client portfolio, Investment proposal.

Technologies: Machine Learning, Spring Boot, Angular, SOAP, REST, Oracle, Artificial Intelligence, …

Project Duration: 6 months.

Department: Product Development
Graduation Project

Title: Design and development of a system for automatic integration of ISO20022 messages.

Description: The exchange of messages between financial institutions is done in different network formats:
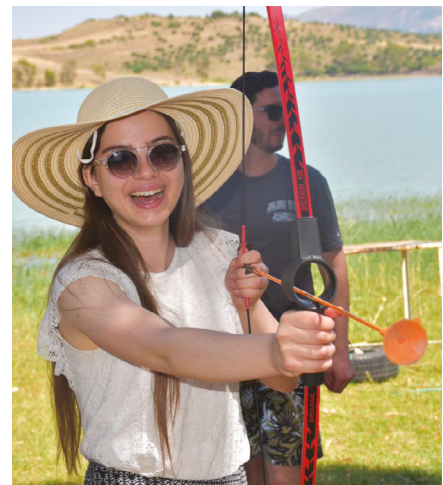- SWIFT
- SIC (between Swiss banks)
- EUROSIC
- FIX
- SECOM

The project aims at integrating ISO20022 messages: Process and validate messages, then save them in a database.

Keywords: Swift Messaging, payments, pacs, camt, pain.

Technologies: Java spring boot, microservices, Angular, Mysql.

Project Duration: 4 months.

Department: Business Intelligence

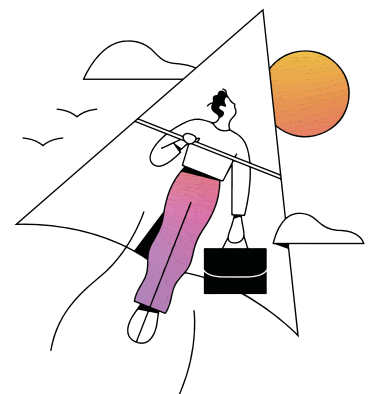**Title:** Design and Development of a Cockpit Analytics BI solution, based on Equalizer Data.

Description: Development of a BI application based on source data from our portfolio management system 'Equalizer'.

Development of dashboards for monitoring client portfolios, client account positions, orders and KPIs for client management.

Keywords: Reporting, Private Banking, Client Portfolio, Positions, Movements, Orders, etc.

Technologies: SQL Server, MSBI (SSIS, Power BI).

Project Duration: 6 months.

Department: Product Development

Graduation Project

Title: Design and Development of an application dedicated to Equalizer API testing.

Description: Equalizer is a Portfolio Management System, which allows the implementation of investment strategies that are efficient, so that it maximizes the gains of the clients and increases their income.

EqIS being the Equalizer API, the development team currently uses an in-house application to simulate and test requests coming from third-party systems.

This application is no longer meeting the new needs of developers, the purpose of the project is to design and develop a new desktop application which:
- will replace the existing one
- will add new functionalities (visualization of logs, creation of test cases, etc.).
- will improve response times and robustness.
- will create a more intuitive and ergonomic testing environment.

Keywords: PMS, API, UI.

Technologies: C++, QT, DataBase.

Project Duration: 6 months.

Department: Information Technology

Graduation Project

Title: Design and development of a solution for smart management of meeting rooms.

The application will be based on connected objects and sensors allowing the initialization, relaunch, alerting and cancellation of meetings.

Description:
- Configure the Raspberry card and connect the requyired sensors.
- Design and develop the SmartRoom module: The module has to be deployed in the Raspberry card which allows interaction with the sensors.
- Design and develop the SmartRoomBack module which encapsulates the business logic of the solution.
- Design and develop the SmartRoomInterf module which allows interfacing with the existing meeting room management solution.

Keywords: Raspberry Pi, Python, Java, Spring Boot, Angular, Mysql.

Project Duration: 5 months.

Department: Quality Assurance

Graduation Project

Title: Design and implementation of a platform to automate the installation of a data integration application.

Description: 'Integrator' product is a data integration application based on the ETL (Extract-Transform-Load) principle. It ensures the transfer of data from a Core Banking system to a portfolio management system.

This data is transformed into flat files and structure files (FDF).

The objective is to manage to design a solution to automate the installation, the recovery of the data and then to make the controls to validate the proper functioning of the application.

Keywords: RPA, Data Integration, Flat File, FDF File, CMD Command prompt, OCR.

Technologies: RPA (UIPATH), JAVASCRIPT, PYTHON.

Project Duration: 6 months.

Department: Quality Assurance

Graduation Project

Title: Implementation of a solution of continuous integration for automatic test scripts.

Description: Currently, automatic test scripts are manually launched, on demand according to test campaigns, on different products separately.

The objective of this project is to implement a solution for managing the execution of automated tests in continuous integration mode, i.e. via scheduled jobs, with synchronization between the different projects/products, and with consolidated test reports.

Keywords: Automation, JavaScript, Java, TestComplete, Web Testing, Keyword Testing.

Technologies: Maven, Azure DevOps, GIT, Jenkins.

Project Duration: 4 to 6 months.

Product Development

Graduation Project

Title: Redesign and integration of banking modules in BANKER'S FRONT and E-BANKING products.

Description: BANKER'S FRONT & E-BANKING are software solutions designed to meet the specific requirements of the private banking and wealth management sectors. They integrate all customer-related information into a 360° view, including:
- On-boarding process
- Documents
- Portfolios
- Payments
- Customer Data.

The project consists in redesigning and implementing banking modules.

The main objectives/benefits of this project will be:
- Get up-to-date with the latest technologies
- Improve the user experience.
- Improve the performance of the application.

Keywords: E-BANKING/ BANKER'S FRONT, Web application, Finance, Client life cycle management.

Technologies: Typescript, Angular, javascript, KendoUI, WebPack, GIT, Bitbucket, Jira.

Project Duration: 6 months.

Department: Product Development

Graduation Project

Title: Development of an application to synchronize data consumed by APIs with specific tables.

Description: Administrative and internal tables in CIM are retrieved when services are started but are not updated while those services are running.

The objective of this project is to extract data from the CIM application and to create a batch process that runs periodically in order to synchronize the data used by the web services (APIs) with the data existing in different resources (database, Json file, etc...).

Keywords: Rest Web Service, Json, Batch Process.

Technologies: Java, Spring, Batch, SQL, Oracle.

Project Duration: 6 months.

FNZ ▢
Tunisia

We are wealth's growth platform

How to apply

Please send us your CV by e-mail
specifying the project title at
the following address:
recruitment-tn@newaccess.ch
or at
StagesPFE-tn@newaccess.ch

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