

# Alejandro Madariaga Navarrete



amadariaga@assetel.com 

[www.linkedin.com/in/alejandro-madariaga-63385131/](https://www.linkedin.com/in/alejandro-madariaga-63385131/) 

<https://amadariaga.com> 

## Professional Experience

### ASSETEL

[www.assetel.com](http://www.assetel.com)

#### ● 4.0 Industry Leader (Since 2021)

SmartSIDE brand creation for IOT innovation over Water Caring Solutions: Flowi Leaks, Flowi Tanks, Flowi Consumption and Flowi Wells.

IOT Project Manager over the POCs, Prototypes, MVPs and ready to market products. It includes the Design, Electronics, Firmware, Telecommunications, Manufacturing and Web Platform development.

Flowi: WSA (ONU) Best Innovative Digital Solution México 2022

Flowi: Heineken Green Challenge, Inc Mty. Top 20. 2023

Flowi: The Next Decade: Water Disruption, Top 10 finalist. 2024

### Timobile

[www.timobile.com.mx](http://www.timobile.com.mx)

#### ● Chief Technology Officer (2009 – 2020)

Enterprise Internet of Things and Mobile Development Applications. Integration of hardware, software and mobile tech for process optimization. **Timobile** is a small and locally well recognized IT company and it is a cofounder organization of the Information Technology Cluster in Querétaro, México.

### Ópalo Software

#### ● Chief Executive Officer (2001-2008)

Ópalo Software was a tailored software development company with 15 head count developers. It was certified by the National Standard Software Model Process **Moprosoft** in 2008, and it was recognized by the main cellular carrier in México **Telcel** since 2007 as certified integrator.

### ITESM Querétaro

#### ● Head of Computer Science Department (1998-2000)

Professors and other personnel evaluations, Human Resources Manager, Budget Manager, Organizational environment Improvement, Strategic Planning, Academic Program Evaluations among other activities.

#### ● Full Time Professor (1990-1998)

Undergraduate and graduate IT teaching areas. Software Engineering, Design of Algorithms, Discrete Mathematics, Computational Theory, Artificial Intelligence, Database Design, Telecommunications and Programming fields. Coach at several graduate and undergraduate student dissertations thesis.

## Education

**Master of Computer Science**  
**ITESM** Monterrey, México (1989)  
Mayor in Artificial Intelligence  
Full Scholarship

**Bs of Computer Systems Engineering**  
**ITESM** Querétaro, México (1987)  
Full Scholarship and Graduated with honors

## Languages

- **Spanish:** Native
- **English:** B2 Level

## Key Skills

- ✓ Team Leadership
- ✓ IT Project Management
- ✓ Process Improvement
- ✓ Analytical Reasoning
- ✓ Applied AI algorithms
- ✓ Internet of Things Architect

## Interest

- ✓ Design Thinking
- ✓ Industry 4.0
- ✓ Clean & Renewable Energy

## Volunteering

Council Member and Treasury Manager at Querétaro IT Cluster 2012-2020 ([www.vorticeit.mx](http://www.vorticeit.mx))

## Some Achievements by Expertise Area

### Internet of Things Architect



- **Creation of 3 patented IoT products:** “IoTrack Ice”, “IoTrack Gas”, and “IoTrack Oee”. (2017)
  - Association *Tmobile/Clarion-Faurecia*. I’m recognized in each patent as the inventor.
  - Face to face negotiations with electronic components providers in Spain and Taiwan (2017).
  - “IoTrack Ice” is in mass production and the initial market target is México, Brazil and Japan (2019)
- **Other IoT personal research:** Energy Monitoring / Smart Shelves / Energy Harvesting (2018)

### Applied Artificial Intelligence Experience



- **Expert Systems**
  - Author of the first Expert System in Manufacturing reported in México “SECAL” *Crysel* (CDYSA), Guadalajara, Jal. Center for Artificial Intelligence *ITESM* Mty (1989)
- **Machine Learning and Neural Networks**
  - Finance: Sales Forecasting patterns. *Kellogg* (2007)
  - Manufacturing: Visual fault detection by NN image processing. *Kellogg* (2008)
- **Genetic Algorithms**
  - Design & development of a Sourcing Network Distribution System: *Kellogg Latin America* (2006)
  - Design & development of an Optimal truck fleet Sceduling for Retail (IoTrack Platform), *Clarion* (2017)

### IT Project Manager



- **Sales Force Automation Mobile and Web Platform: Vemobile** (since 2010)
  - Initially builded for *Blackberry* Systems then transferred to *Android* platform
  - Attending about 95 small and medium distribution companies in México and Central América (2018)
  - The system is registered and certified as a *Telcel* Solution
- **Development leadership for many systems at Logistic and Manufacturing projects** such as:
  - *Pic USA, Inc*: Global Customer Order Portal (2016)
  - *Kellogg*: OEE Measurement, Computer Vision Systems, Intelligent Production Scheduling Implementations insite for México, Guatemala, Colombia, Venezuela and Brasil (2002-2006)
  - *Ferromex / Ferrosur / Ferrovalle*: Automatic Equipment Identification System (2006-2008)

### Academic Experience



- **Head of The Computer Science Department at ITESM Qro** (1998-2000)
  - Succesful negotiation for professors interchange programs with Applied Matematics Institute (Cuba), University of Central Florida (USA) and Guelph University (Canada).
- **Full Time Professor ITESM Qro** (1991-1997)
  - Creation of The Artificial Intelligence Laboratory publishing 22 refereed articles with undergraduate students over many international forums

Specific activities: Process Analysis, Commercial proposal development, Business Presentation, Negotiation of conditions, Scopes and delivery times, System Design, Team coordination, ERP conectivity, Partial customer reviews, System use training, Final system delivery and after sales following up for at least the next IT projects:

### Retail and Logistic Projects

- Systems for programming and administration of personnel and cargo transport services, including geolocation, monitoring and alerts services.
  - Transportes Escobedo. Querétaro, Qro. (2019)
  - RentAcar, Querétaro, Qro. (2019)
  - Luxury Hotel Bus, Querétaro, Qro. (2017)
- Delivery route intelligent optimization systems
  - Internet of Things Platform (IoT) for real-time demand detection and optimal calculation of distribution routes for ice-making companies applied in a variety of companies (Hielo Prisma, Hielo Innova, Hielo Agua Fría, Hielo Rey, Hielo Procutitos, Hielo Bajo Cero, Hielo Iglú). (2018).
- Systems for measuring Route Efficiency and ABC Costs Analysis for logistics services
  - Hielo Innova, Irapuato, Gto. (2018)
  - Transportes Escobedo. Querétaro, Qro. (2019)
  - Ferrosur and Ferromex, Veracruz, Ver. / Guadalajara, Jal (2007 – 2008)
- Sales force automation systems (including sales, pre-sales, delivering and collection)
  - Mobile and Web Platform Vemobile ([www.vemobile.mx](http://www.vemobile.mx)). This system enables the work in the field of presales, sales, deliveries and collections to 97 companies dedicated to product distribution. Leading system in México and Central América. Querétaro, Qro. (2009-2019).
- Sales forecasting systems
  - Productos Totis, Tizayuca, Hgo. (2014)

### Manufacturing Projects

- Efficiency measurement systems for production lines (OEE)
  - Applica Manufacturing, Querétaro, Qro. (2001)
  - Kellogg América Latina (México, Guatemala, Colombia, Brasil, and Venezuela) (2002- 2006)
  - Grupo Condumex (Cordaflex, ConduTel, Nacobre, Sealed Power) (2003 – 2005)
  - Productos Totis, Tizayuca, Hgo. (2014)
  - Omnilife Manufacturingf, Guadalajara, Jal. (2015)
- Quality inspection systems by artificial vision
  - Planta Gollek, Linares, NL (2008)
- Intelligent detailed production scheduling systems
  - Cordaflex, Querétaro, Qro.
  - Kellogg América Latina (México, Guatemala, Colombia, Brasil and Venezuela) (2002- 2006)
  - Omnilife Manufacturing, Guadalajara, Jal. (2015)
  - Textiles Anahuac, Puebla, Pue. (2016)
- Logistics network optimization systems for manufacturing operations
  - Kellogg América Latina, Querétaro, Qro. (2005)

Development platforms such as: Windows, Linux, Android, iOS, Web, Web services, Java, Java Script, PHP, Phyton, VBasic, Prolog, Oracle, SQL Server, MySQL, Potgress.

Tools and PM methodologies and innovation such as: “Teamworks Projects”, “BaseCamp”, “Assana”, “Jira”, “Extreme Programming”, “Scrum”, “Git/GitLab”, “Design Thinking”, Power BI