

PORTOFLIO

M'hassni Mohamed



Table of content

- 1. Who am I?**
- 2. A Family Business Success Story**
- 3. Key achievements**
- 4. Failures and lessons learned**
- 5. Conclusion**

Introduction

Who am I?

M'hassni Mohamed's passion for automation is evident in his work helping companies improve their **service quality** and **profitability** by **automating** their business processes. With varied experience in systems architecture, geomatics, digital marketing, and many other areas, M'hassni brings a unique perspective to every project he undertakes



GIS and Cloud engineer
graduated from EHTP

Microsoft Certified Azure
Solutions Architect Expert

A Family Business Success Story

Early Involvement and Passion

- First topography experience at age 12
- Started learning programming languages (C, C++, JavaScript, vba, ...) at 13
- Attended a highly selective preparatory program (Math, Physics, Computer Science)
- Participated in various code problem-solving competitions to challenge myself



National podium winner in ICPC the most prestigious programming competition in the world

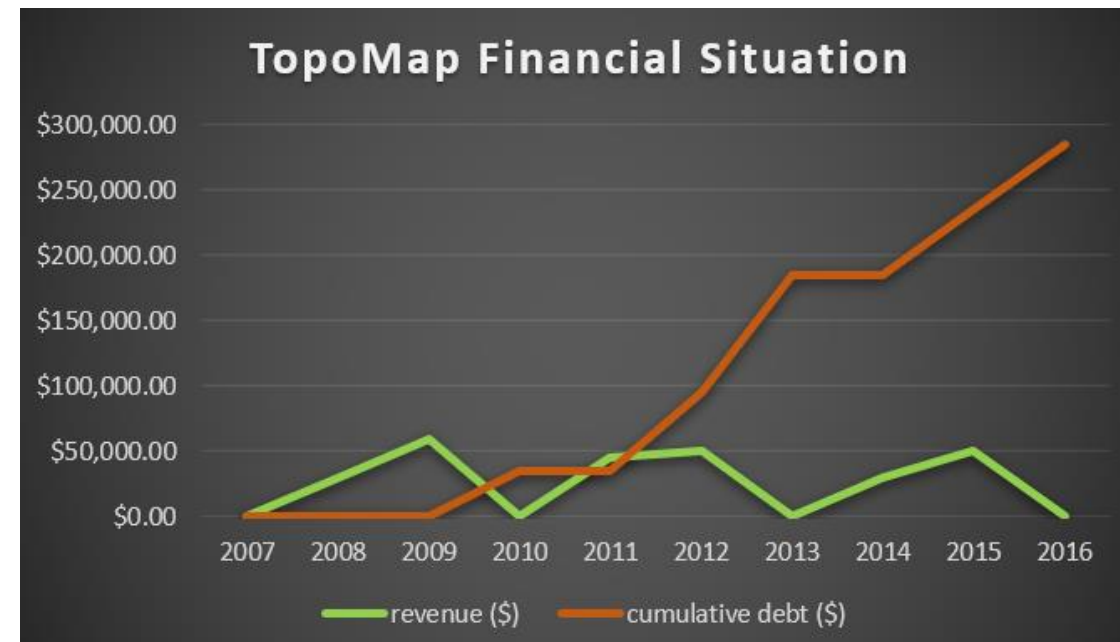
A Family Business Success Story

In the meantime

- **Family business:** TopoMap, founded in 2007
- **Specialization:** B2B Topography and geomatics
- **Financial struggle:** Deficit for 10 years, cumulative debt of \$300,000



At **2016** Decided to study Topography and Computer Science at EHTP, the most prestigious school in the country



A Family Business Success Story

Implementing Technology in TopoMap

- Introduced technological solutions to optimize workflow :
 - Business process optimization
 - cloud-based system infrastructure
 - infrastructure networking
 - staff training to new GIS technologies (topographical drones , ArcGIS , 3D models ...)
 - Developed Tools for automating repetitive tasks

 <https://youtube.com/shorts/fdf3KrEa1tQ>

- Developed **TopoMap CadGIS** a software extension to manage land title lifecycle according to Cadastral office standards



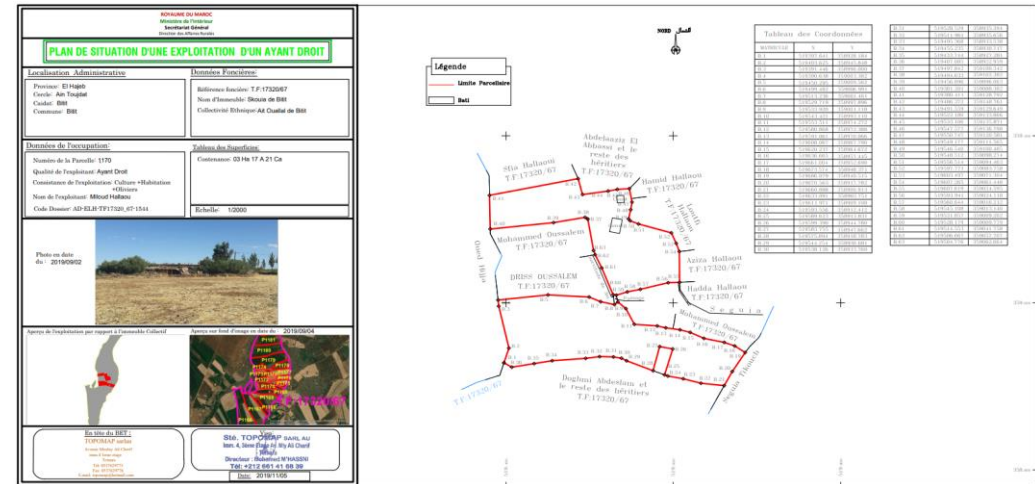
A Family Business Success Story

Taking a Leap of Faith

- Company struggling, but bid on a large public contract
- Required were 25 topography technicians for office work, but TopoMap had **only 4** available
- a **4-month** deadline



Decided to develop **TopoBot** a solution to automate most of the plan-making process to meet the project



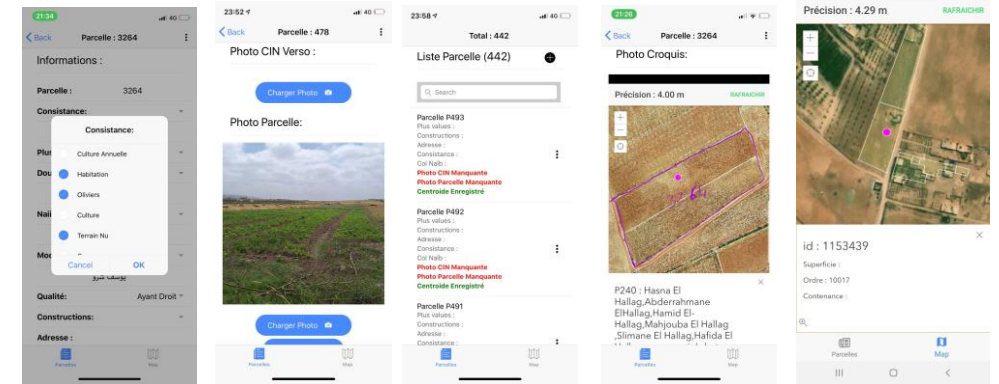
fully automated drawing with TopoBot

A Family Business Success Story

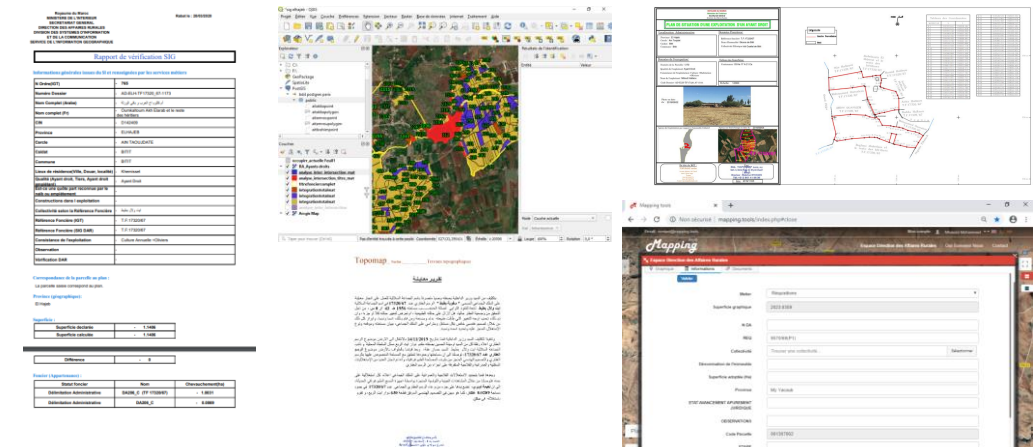
TopoBot Overview

- Mobile solution for data acquisition
- AutoCAD extension for automated drawing
- Automatic report and parcel sheet generation
- Automated geometric data correction
- Centralized database for real-time data
- Bot script to integrate data throughout the ministry platform
- Cartographic server for drone images

TopoBot Survey Mobile App



TopoBot Survey Desktop



A Family Business Success Story

Project Success

- Error rate reduced **from 60-70% to 1-2%**
- Plan generation time decreased from **7 hours to 2 minutes**
- **7x increase in revenue** compared to the previous years
- Market leader in topography survey sector (short-term)
- All company debt fully repaid



A Family Business Success Story

Overcoming Challenges

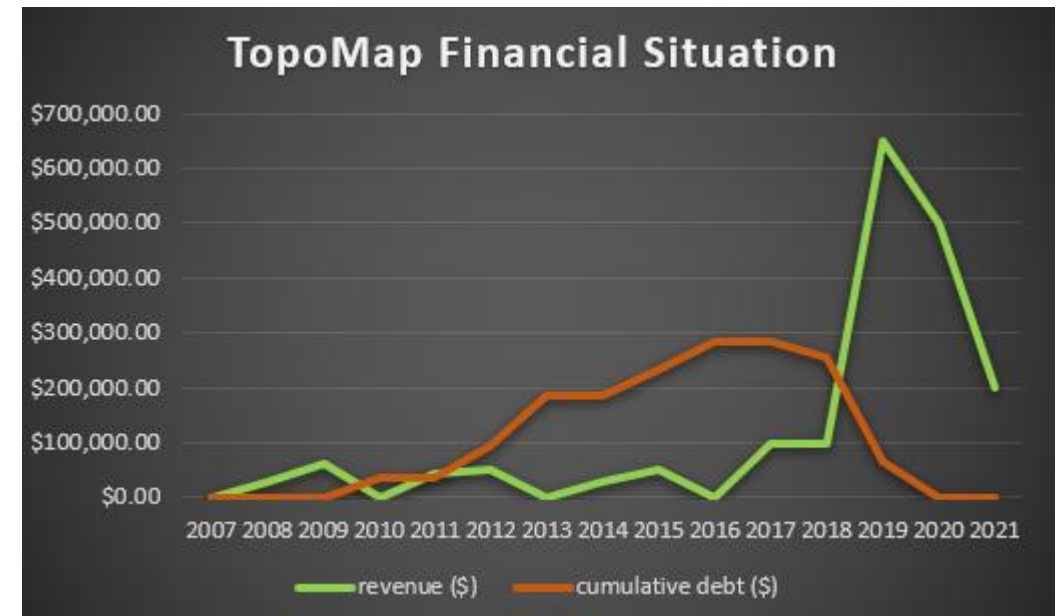
The COVID-19 pandemic resulted in a decrease in topographical survey business



In 2021, secured a special public contract for topographic quarry plans with specific constraints that required research work involved a huge workload



Special project demands led to developing TopoBot Quarries and related research work



A Family Business Success Story

Innovating for the Special Project

Research Project:

- Research project management to reconstruct quarries with minimal error

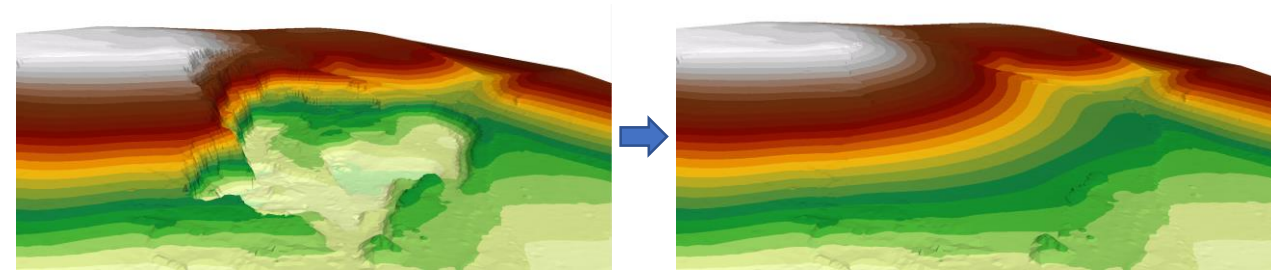
 <https://youtu.be/PsMrHKsrySc>

TopoBot Quarries :

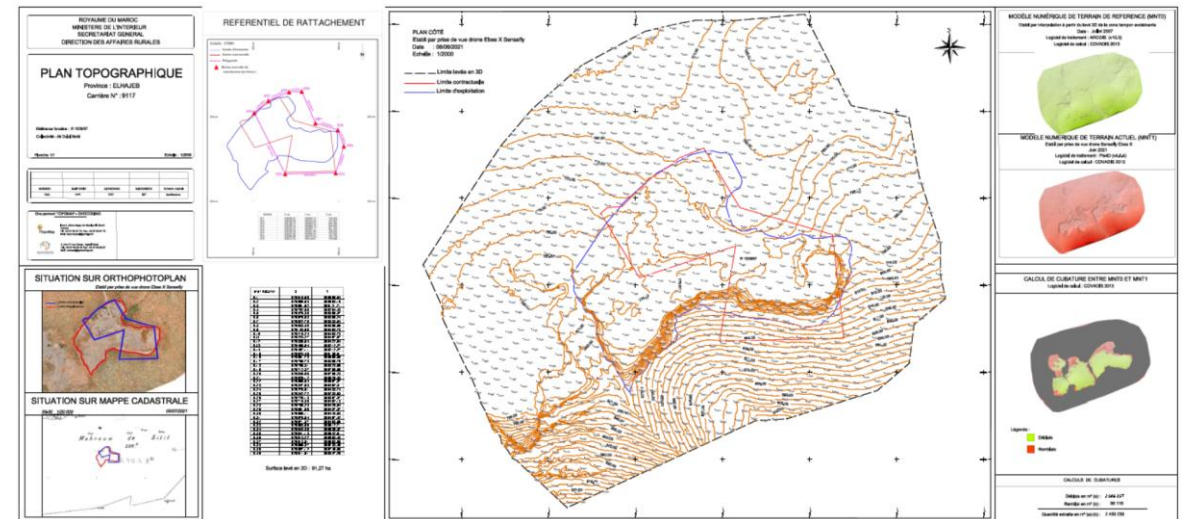
- Mobile solution for quarry data management
- 3D drone measurements for 350 quarries
- Automated topographic plan generation
- AutoCAD extension for automated drawing based on Moroccan cadastral standards
- Automatic report generation for each quarry
- Centralized real-time database
- Supervising drone data acquisition in the field

 <https://youtu.be/V6rn6ncZst4>

Quarries reconstitution results



TopoBot Quarries Desktop

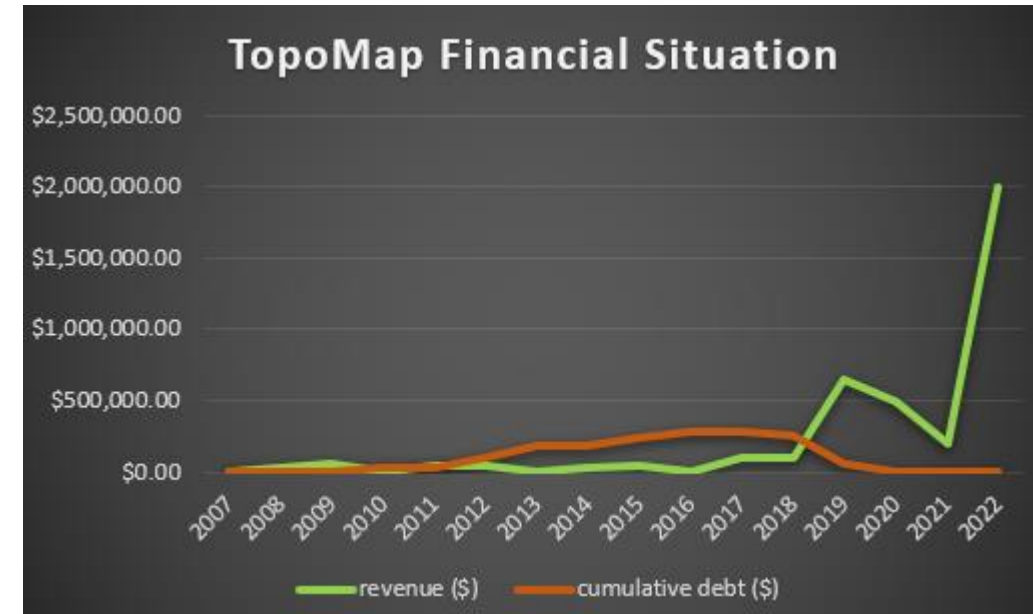


fully automated drawing with TopoBot

A Family Business Success Story

Achievements from the Quarries Project

- Error/incomplete deliverable rate reduced **from 80-90% to 1-2%**
- **3x increase in revenue** compared to the last 2 years
- Project revenue reached **\$2 million**
- Plan generation time decreased from 40-50 hours to 5 minutes
- Report generation time decreased from 20 hours to 5 minutes



A Family Business Success Story

Expanding Horizons

- Created a new company “**Handle IT Services**” offering IT consulting services
- Providing personalized training in spatial data analysis and process automation as a sole expert
- Fostering relationships with partners and expanding B2B networks



Conclusion

My passion for technology, education, and dedication to the family business transformed Topomap into a market leader, and led to the creation of a new consulting company Proven ability to innovate and deliver results in challenging circumstances while expanding B2B networks