

# PORTOFLIO



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# 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 competitions in the world*

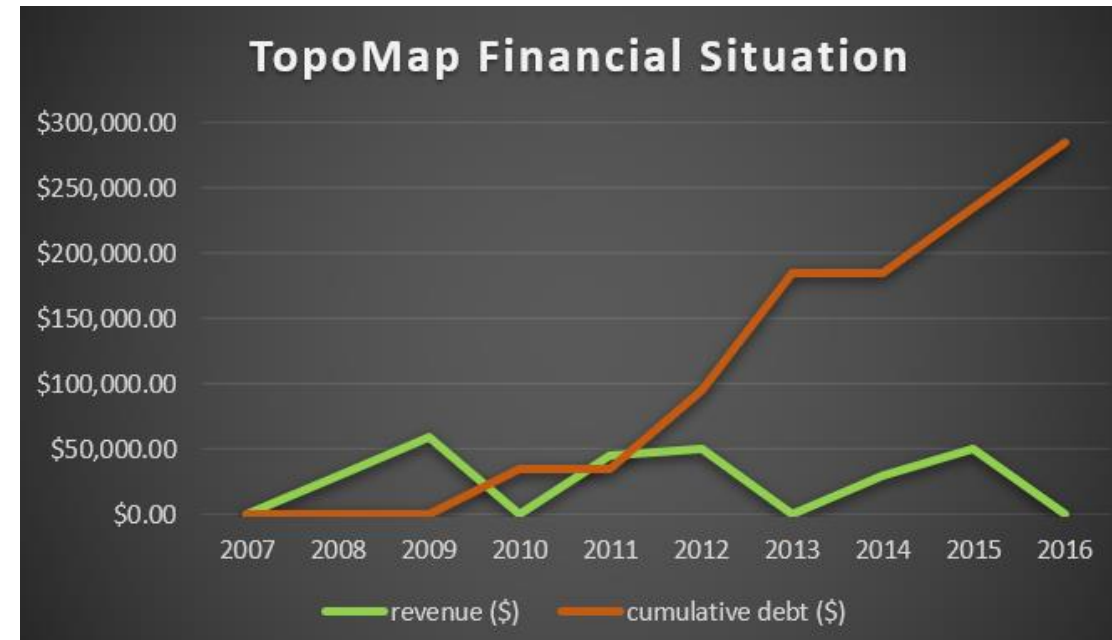
# A Family Business Success Story

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



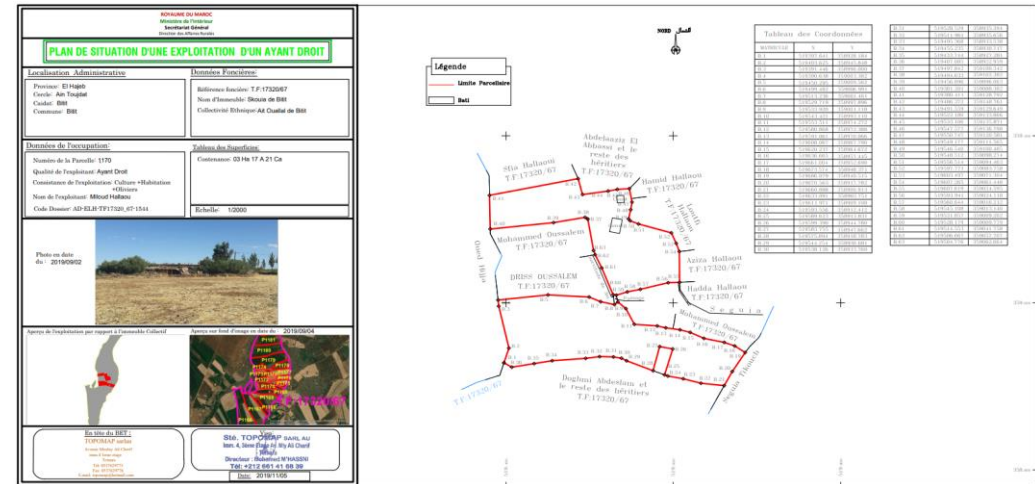
# A Family Business Success Story

## 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



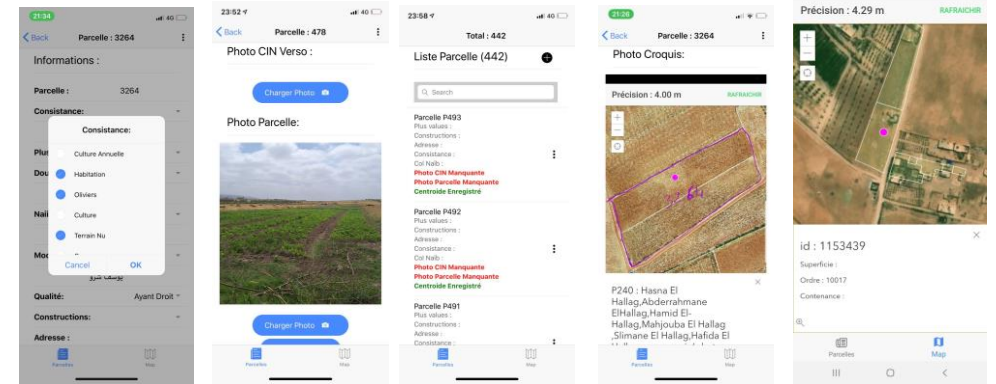
*fully automated drawing with TopoBot*

# A Family Business Success Story

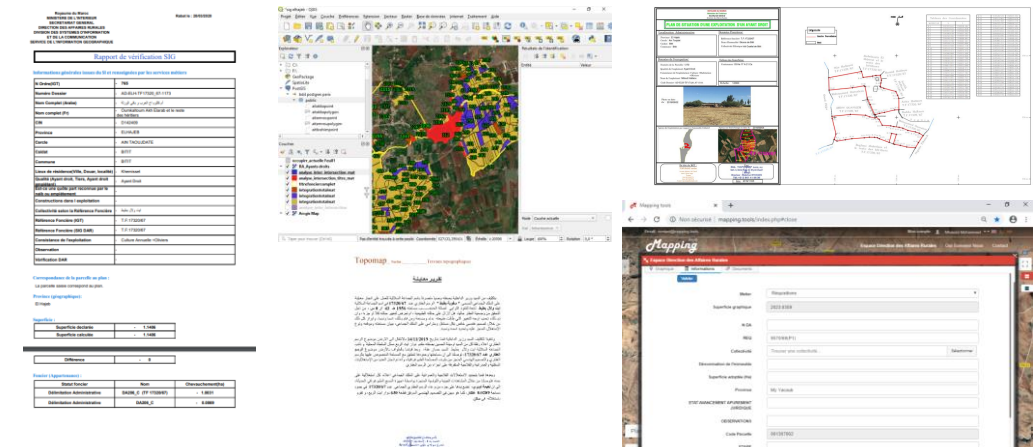
## TopoBot Overview

- 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 **2 hours to 5 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



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



# A Family Business Success Story

## Innovating for the Special Project

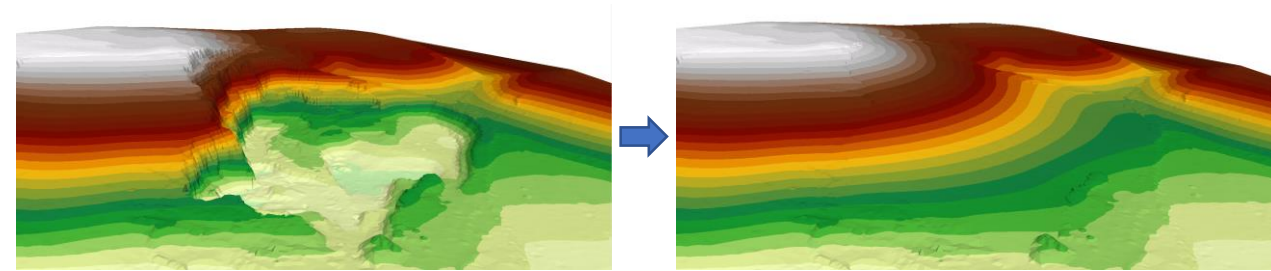
### Research Project:

- Research project management to reconstruct quarries with minimal error

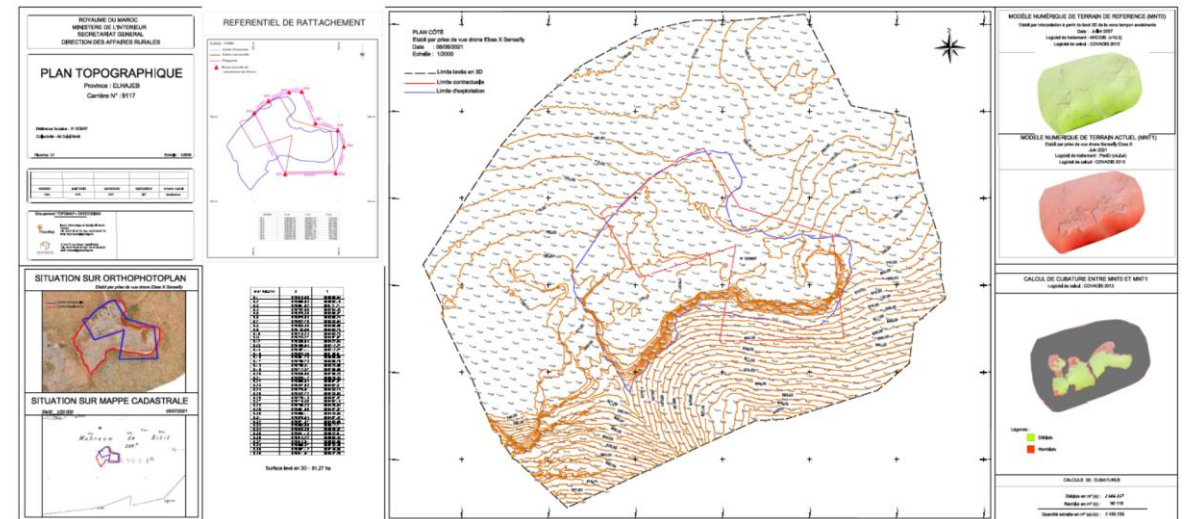
### TopoBot Quarries :

- 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

### Quarries reconstitution results



### TopoBot Quarries Desktop

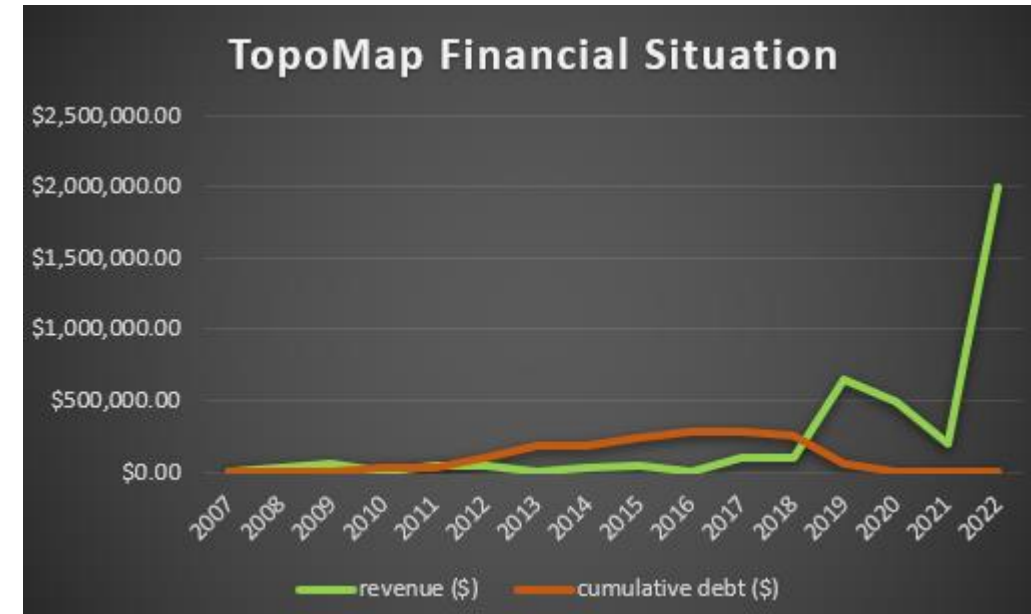


*fully automated drawing with TopoBot*

# A Family Business Success Story

## Achievements from the Special Project

- Error/incomplete deliverable rate reduced **from 80-90% to 1-2%**
- Plan generation time decreased from 7 hours to 5 minutes
- **3x increase in revenue** compared to the last 2 years
- Revenue reached **\$2 million**



# 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