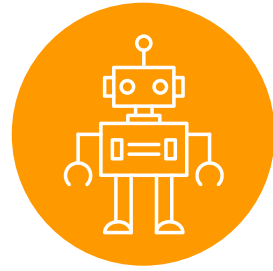


REVOLUTIONIZING CONSTRUCTION USING ROBOTICS



Construction



Robotic



Solutions

The Power of Robotics

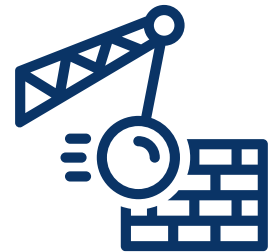
Solving construction challenges:



Sustainability



Security



Rework



Deadlines

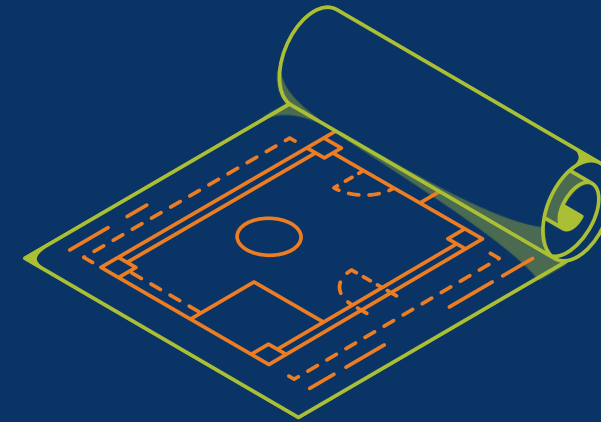
Our Goal

1 B \$
Start-Up



Manual **Layout Tracing?**

Transferring Blueprint Measures



**2D Floor
Blueprint**

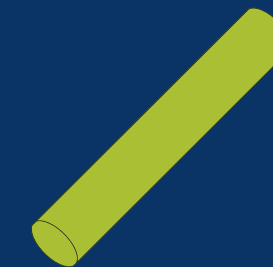


**Worksite Floor
Level**

Used Tools



**Measure
Tape**



Chalk



Thread



Problem Manifestations

- 2.5 B \$
Moroccan Construction



Rework

12% of the construction project budget.

Manual Layout Tracing Methods are:



Dangerous

Life-threatening risk for workers.



Unreliable

High risk of human error.



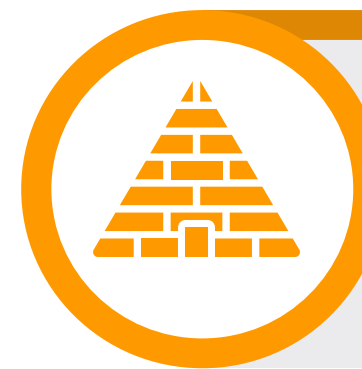
Untrackable

Project management issues for companies.



Sluggish

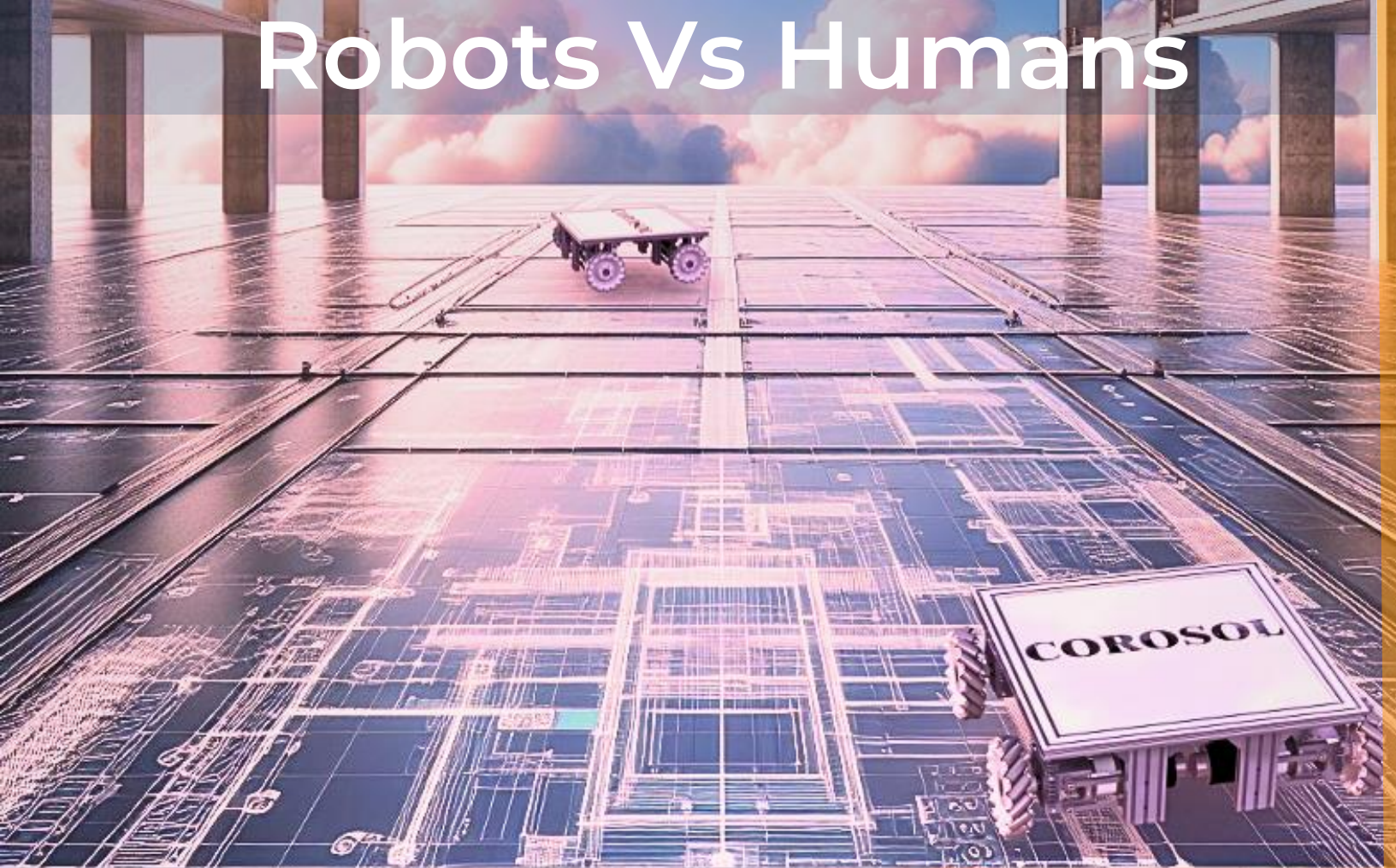
Significant time and collaborative effort.



Outdated

Originate from the pyramid era.

Robots Vs Humans



Robotic Solution Advantages



Precision

×10 times (from cm to mm).



Speed

×10 times (from days to hours).



Productivity

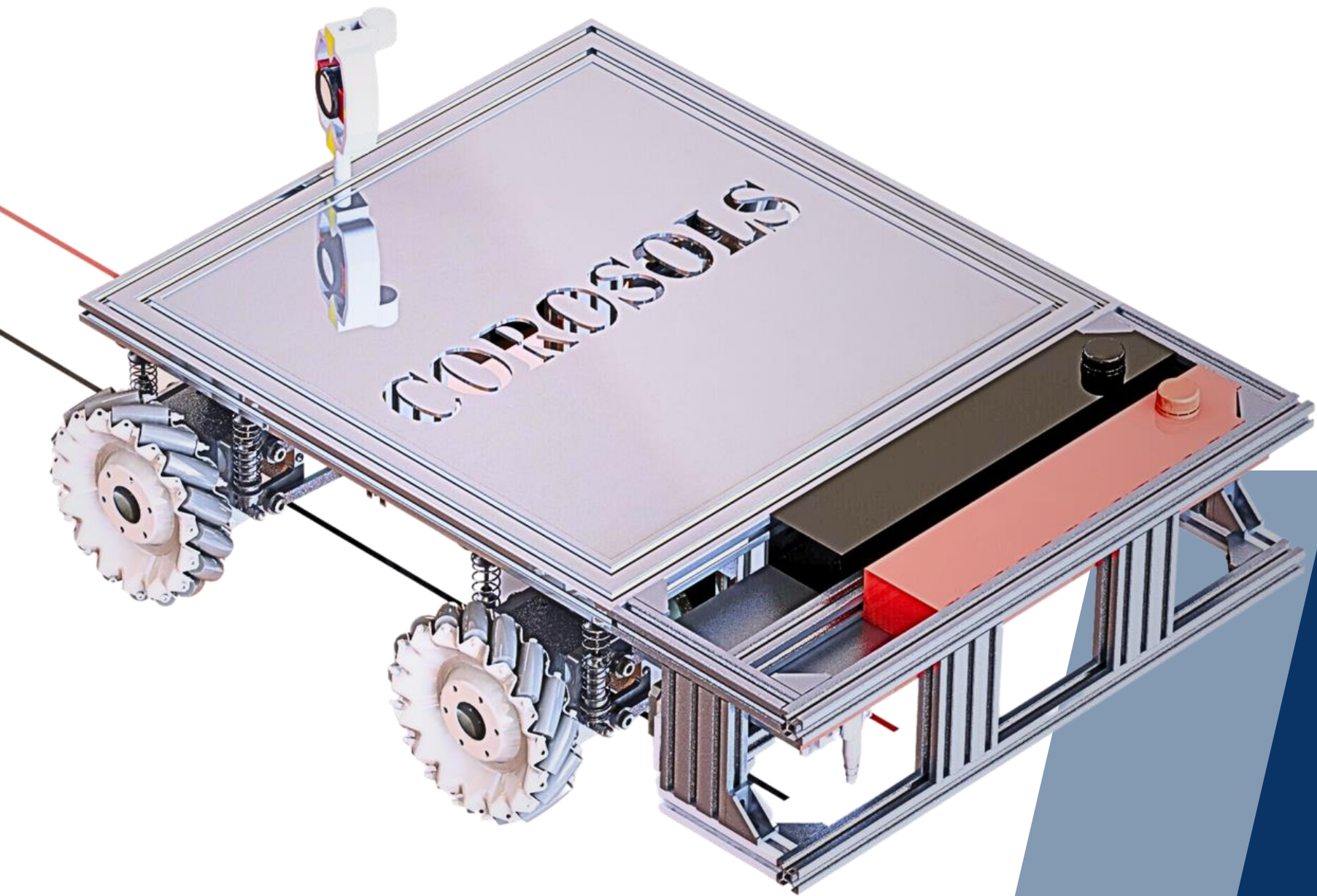
Up to 300% productivity increase.



Security

Avoiding Layout tracing in Dangerous areas.



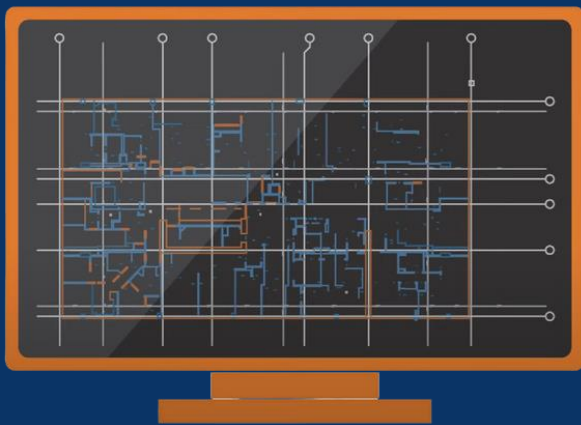


Robotic **Solution**



Print **BIM & Construction Layouts** directly in the field.

Requirements



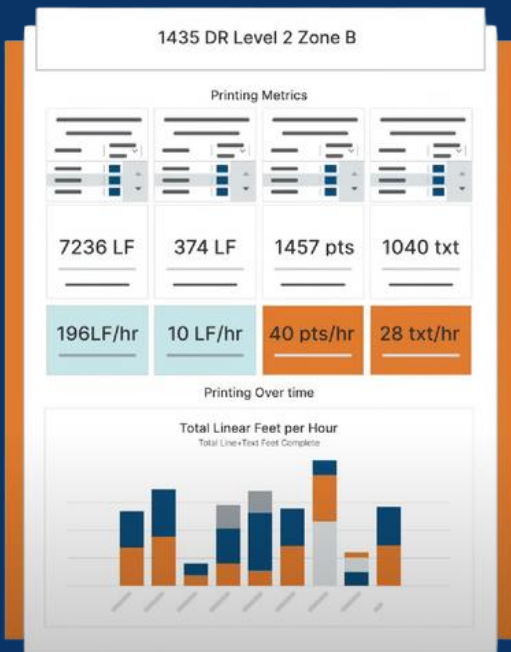
BIM Digital Model

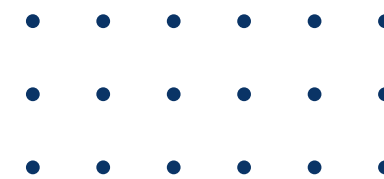
- AutoCAD
- Revit



Clean Floor

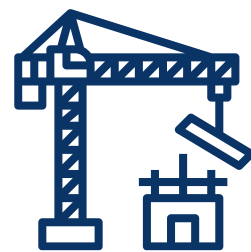
Final Report





Customer Discovery

Key Players:



4 Construction Companies (SMEs)

Interviews with the owners about manual layout tracing.

STE AMENAL **STE BASTIF**
E.Z.F **STE BOULAN**



3 Project Management, Engineering & Industrial Companies

Interviews with top management about manual layout tracing.

JESA  **OCP**  **Azura**

4 Architects



2 Topographers



3 Workers



Valuable Insights:

1



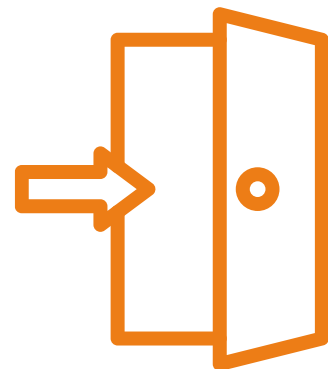
Confirming Assumptions

2



Customer Segments

3



Market Entry Strategy

4



Other Industrial Applications

Next Steps:



Partnership Deal

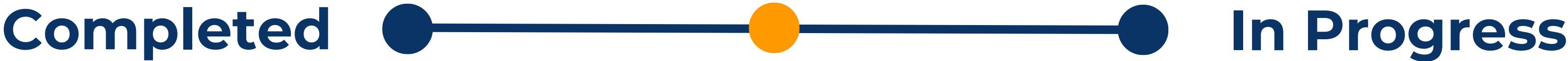


MVP Development

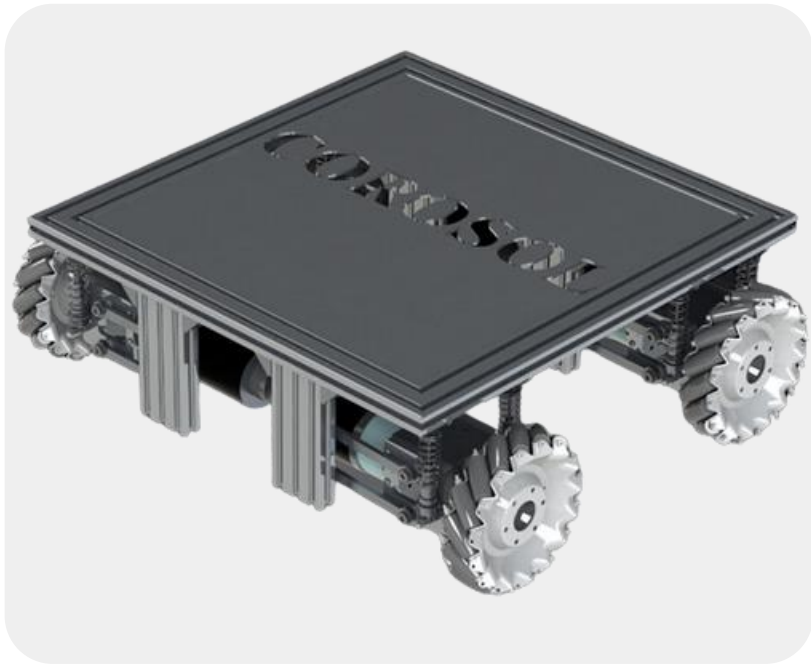


Test and Validate

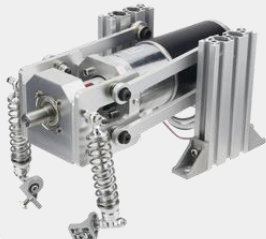
Prototype Advancement



✓ **Mechanical Solution:**



Independent suspension



- **Terrain Adaptation**
- **Reduced Vibrations**

Mecanum Wheels



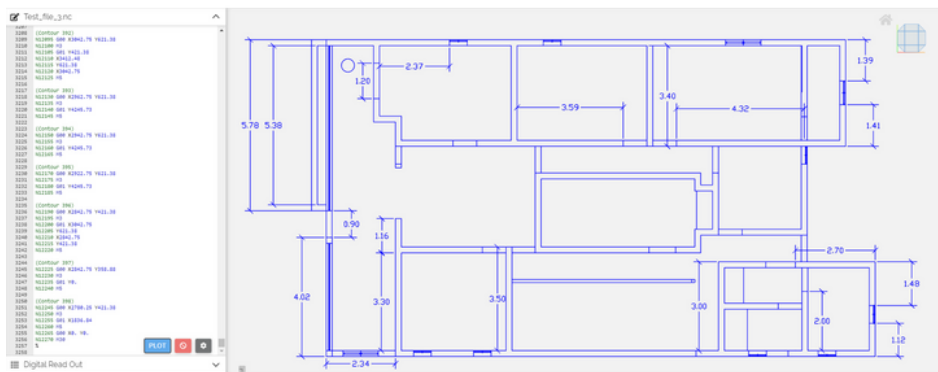
- **Multi Directional**
- **Precise Control**
- **Handling Debris**

✓ **Printing Algorithm:**

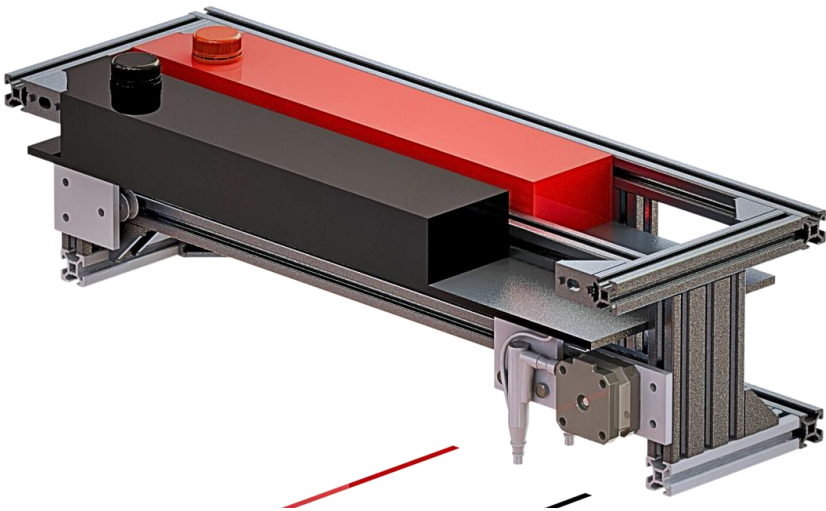
1 BIM Digital Model



2 Robot Instructions



✓ **Printing Solution:**



Spray Painting System

✓ **Positioning Solution:**



Robotic Total Station based Positioning

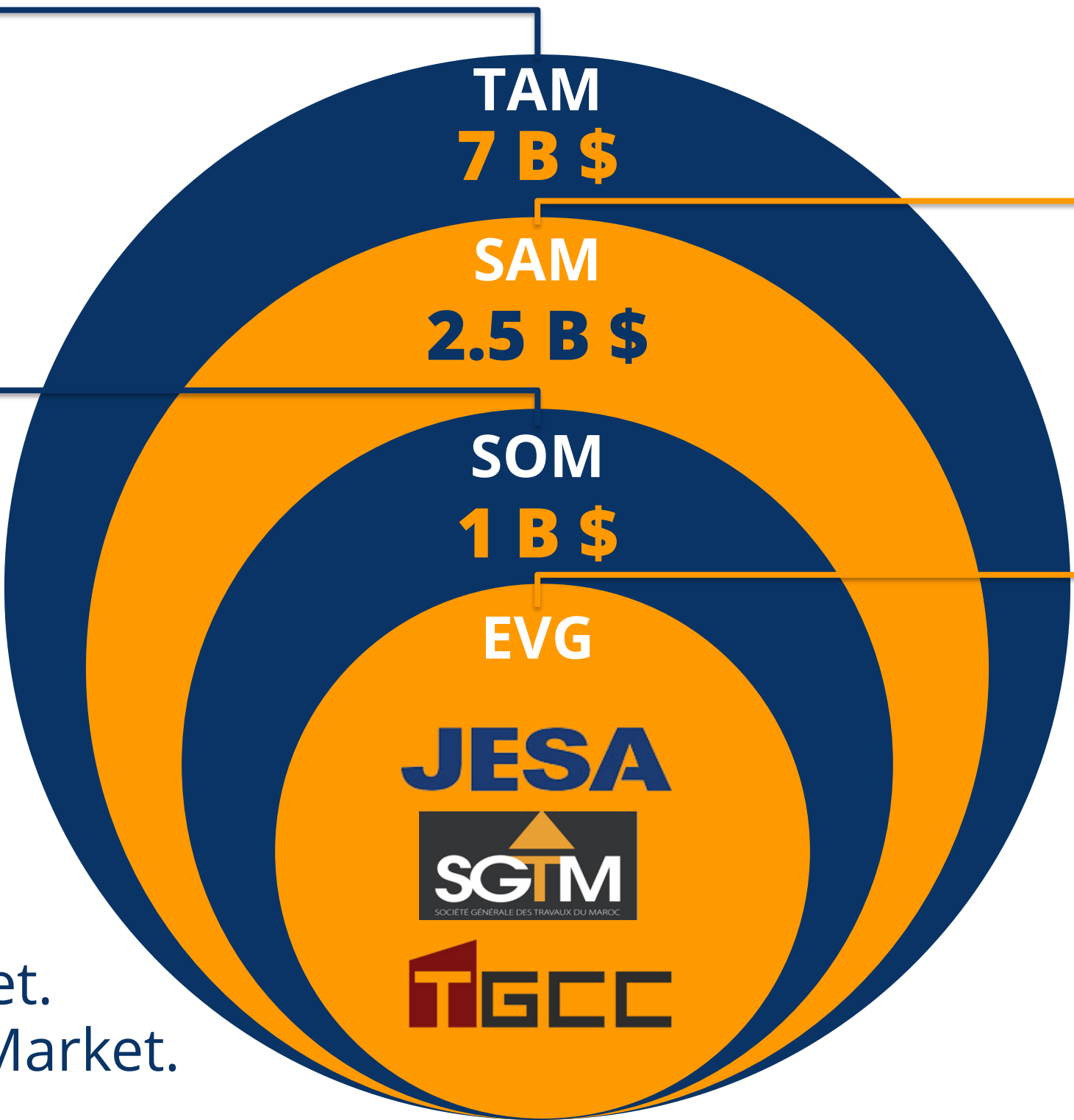
Market Sizing

**Construction Rework
Market in Africa**

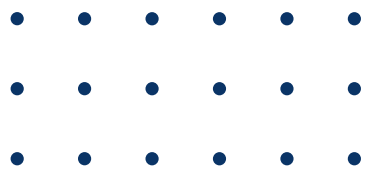
**BIM & Layout Tracing
Market In Morocco**

**Construction Rework
Market in Morocco**

Early Adopters



TAM: Total Adressable Market.
SAM: Serviceable Available Market.
SOM: Our share of the pie.



Experienced Team



Hamza BOULANDOUM

CEO/Founder

Commitment: Full Time.

Industrial Management Engineering student with 5 years of experience in Robotics.

Business & Management



Robotics & Engineering



Youssef MAKHLOUF

Robotics Expert/Co-Founder

Commitment: Part Time.

Industrial Management Engineering student with 5 years of experience in Robotics.

Robotics & Engineering



Supply Chain Management



Amine AIT OUFKIR

BIM Expert/Co-Founder

Commitment: Part Time.

BIM Engineer & BIM Coordinator with over 3 years of experience in BIM & Digital Twin.

BIM & Digital Twin



Energy Engineering



Ayyoub EL-KASMI

Data & AI Expert/Co-Founder

Commitment: Part Time.

Industrial Management Engineering student with 3 years of experience in Data Science and AI.

Data Science & AI



Finance





OUR **ASK**



**Partnership
Deal**



**Collaborative
Approach**



**Gather On-site
Data**



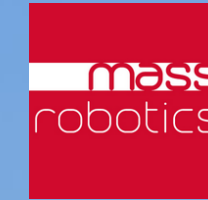
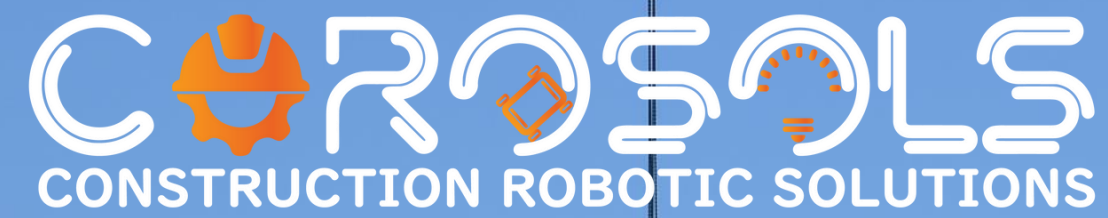
Funding



**Hiring Team
Members**



**Robotics Hardware
Expenses**



COROSOLS.COM

THANK YOU!