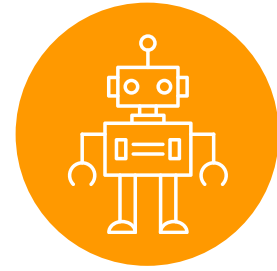


REVOLUTIONIZING CONSTRUCTION
USING ROBOTICS





Construction



Robotic



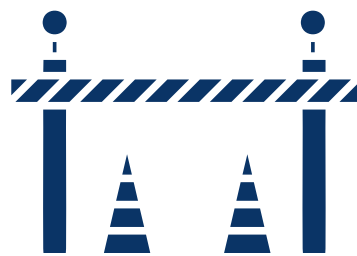
Solutions

The Power of Robotics

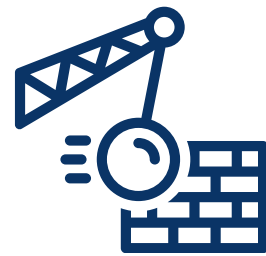
Solving construction challenges:



Sustainability



Security



Rework



Deadlines

Our Goal

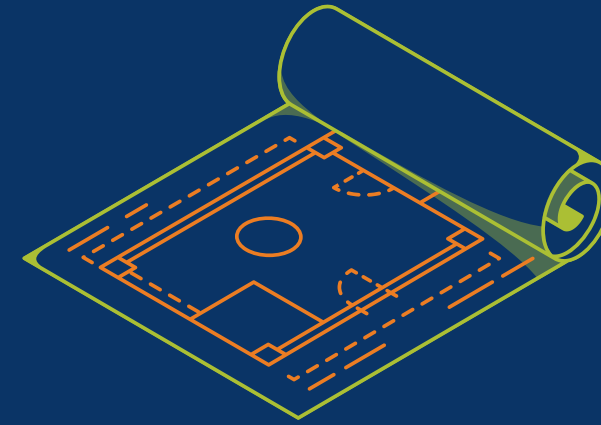
1 B \$
Start-Up



Manual **Layout Tracing?**



Transferring Blueprint Measures



**2D Floor
Blueprint**

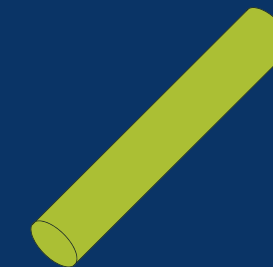


**Worksite Floor
Level**

Used Tools



**Measure
Tape**



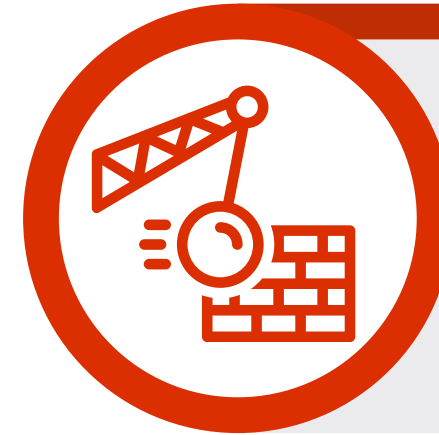
Chalk



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.



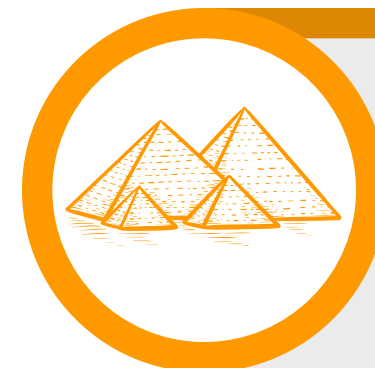
Untrackable

Project management issues for companies.



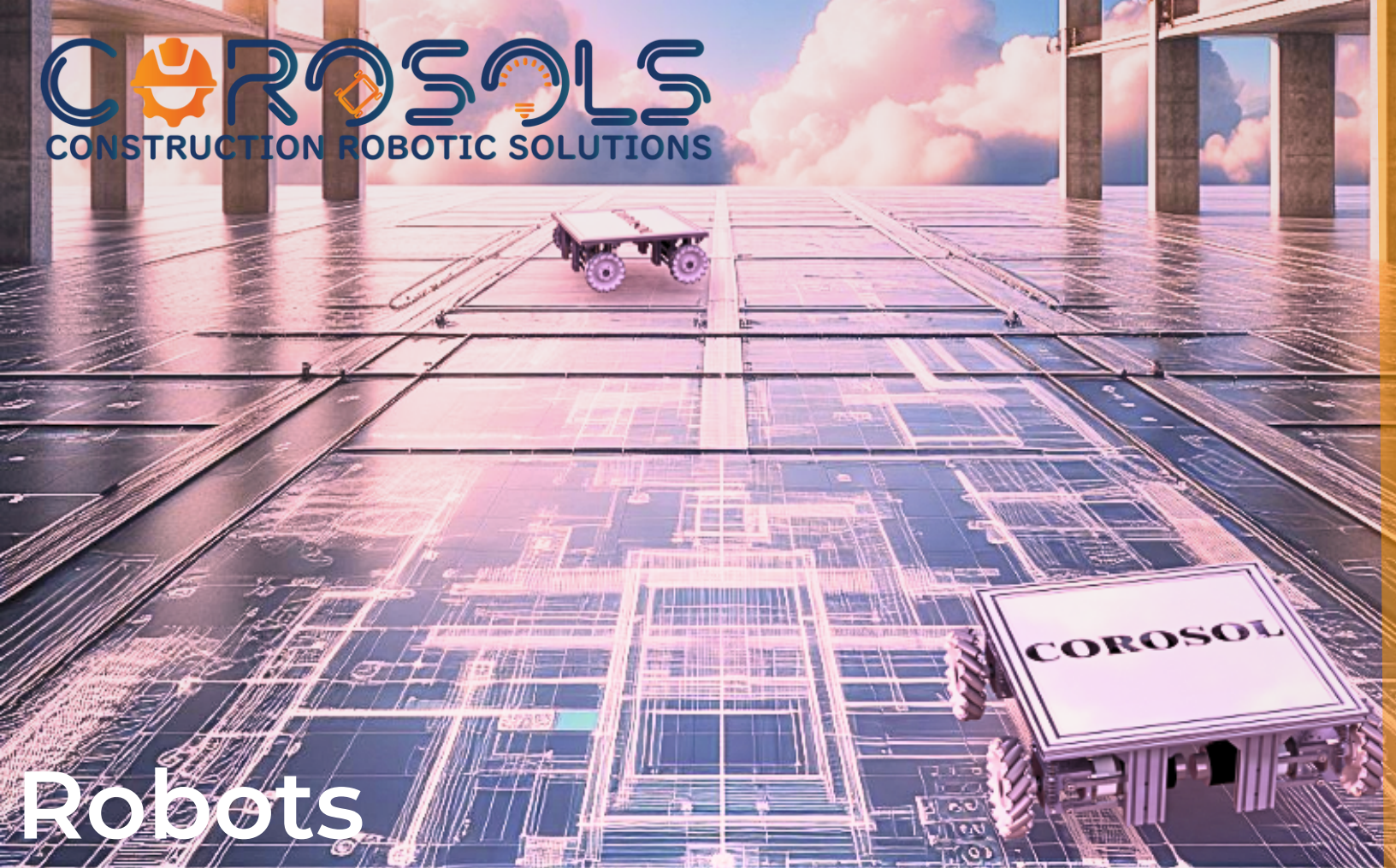
Sluggish

Significant time and collaborative effort.



Outdated

Originate from the pyramid era.



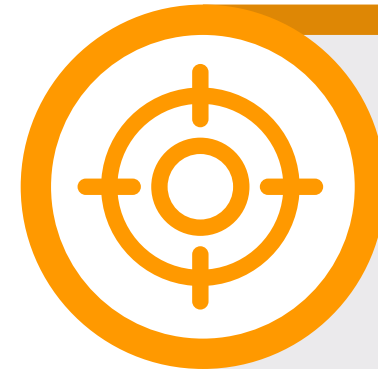
Robots Vs Humans



Robotic



Solution Advantages



Precision

×10 times (from cm to mm).



Speed

×10 times (from days to hours).



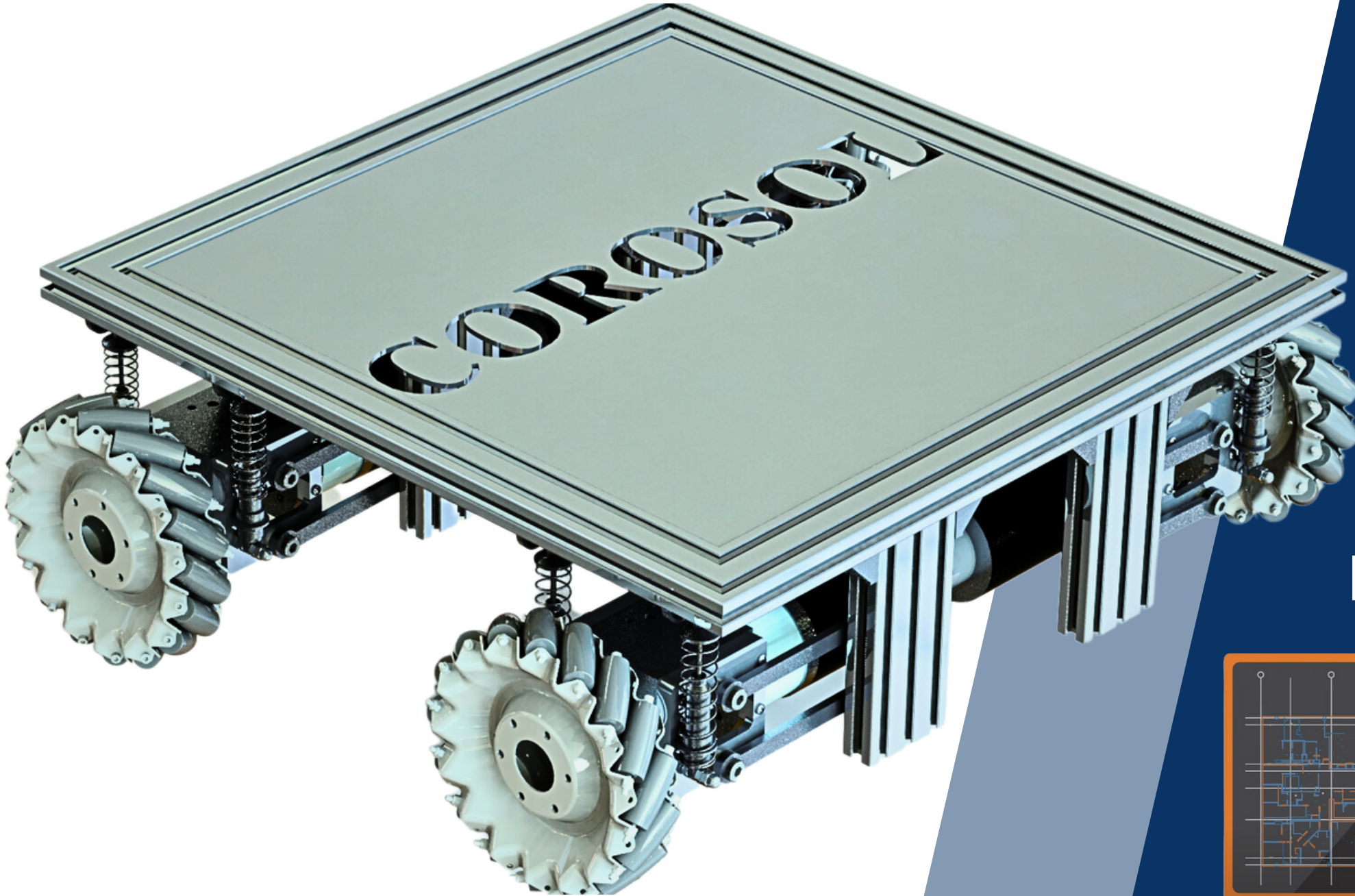
Productivity

Up to 300% productivity increase.



Security

Avoiding Layout tracing in Dangerous areas.

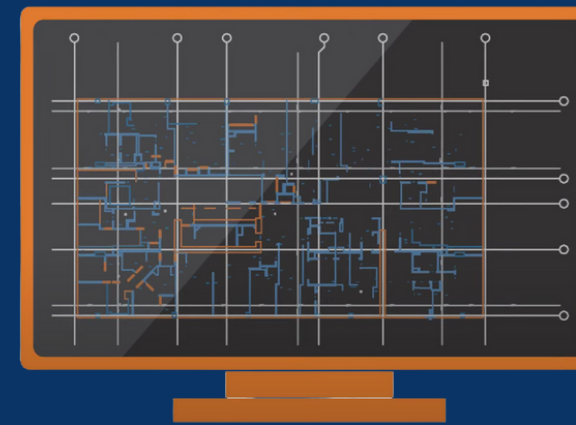


Robotic **Solution**



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

Requirements



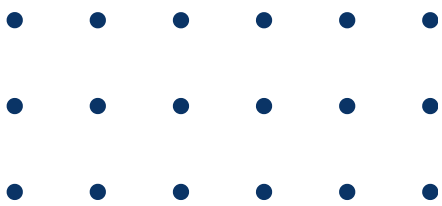
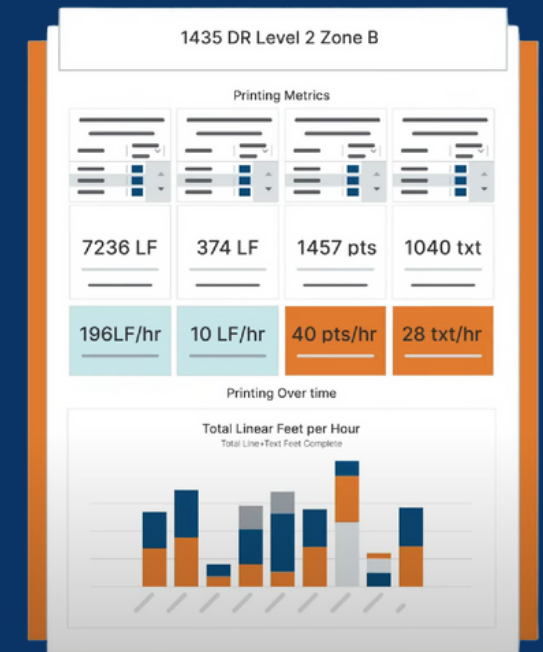
BIM Digital Model

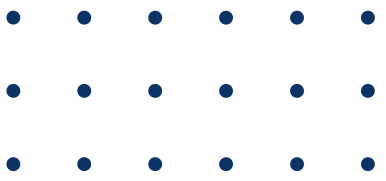
- AutoCAD
- Revit



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



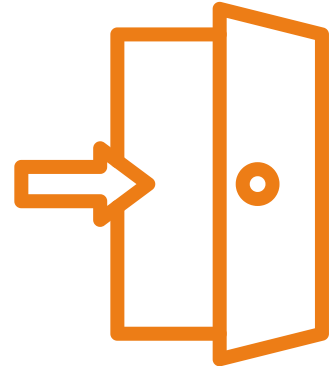
Confirming Assumptions

2



Customer Segments

3



Market Entry Strategy

4



Other Industrial Applications

Next Steps:



Partnership Deal



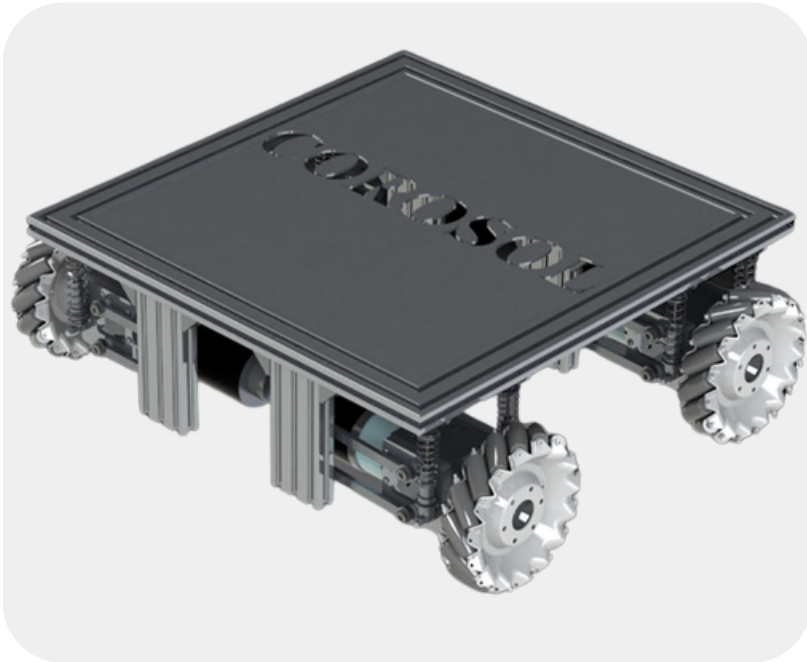
MVP Development



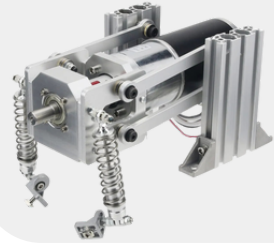
Test and Validate

Prototype Advancement

Mechanical Solution:



Independent suspension



- Terrain Adaptation
- Reduced Vibrations

Mecanum Wheels



- Multi Directional
- Precise Control
- Handling Debris

Positioning Solution:

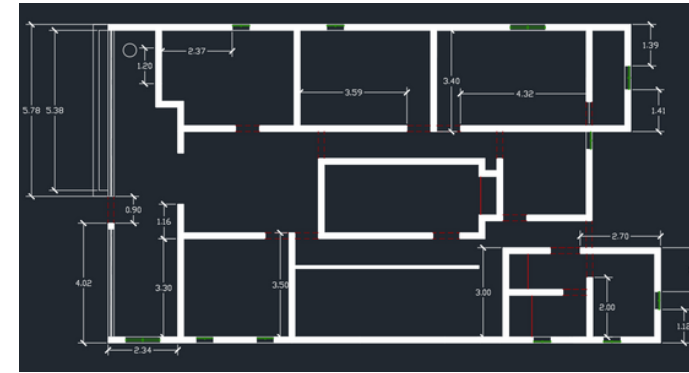


HP Siteprint

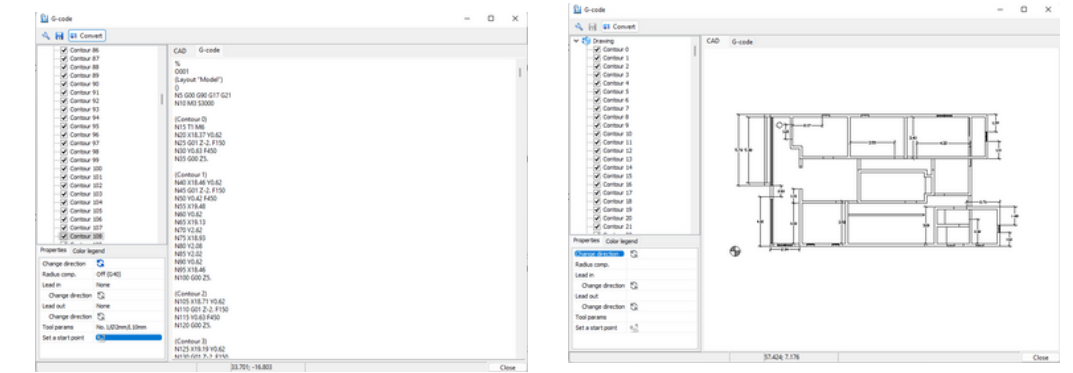
Dusty FieldPrinter

Printing Algorithm:

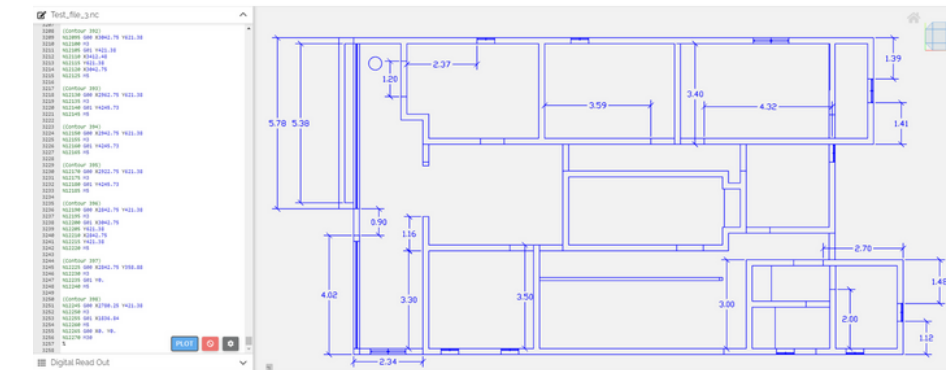
1 Level Floor Blueprint



2 Blueprint Conversion



3 Sending Robot Instructions



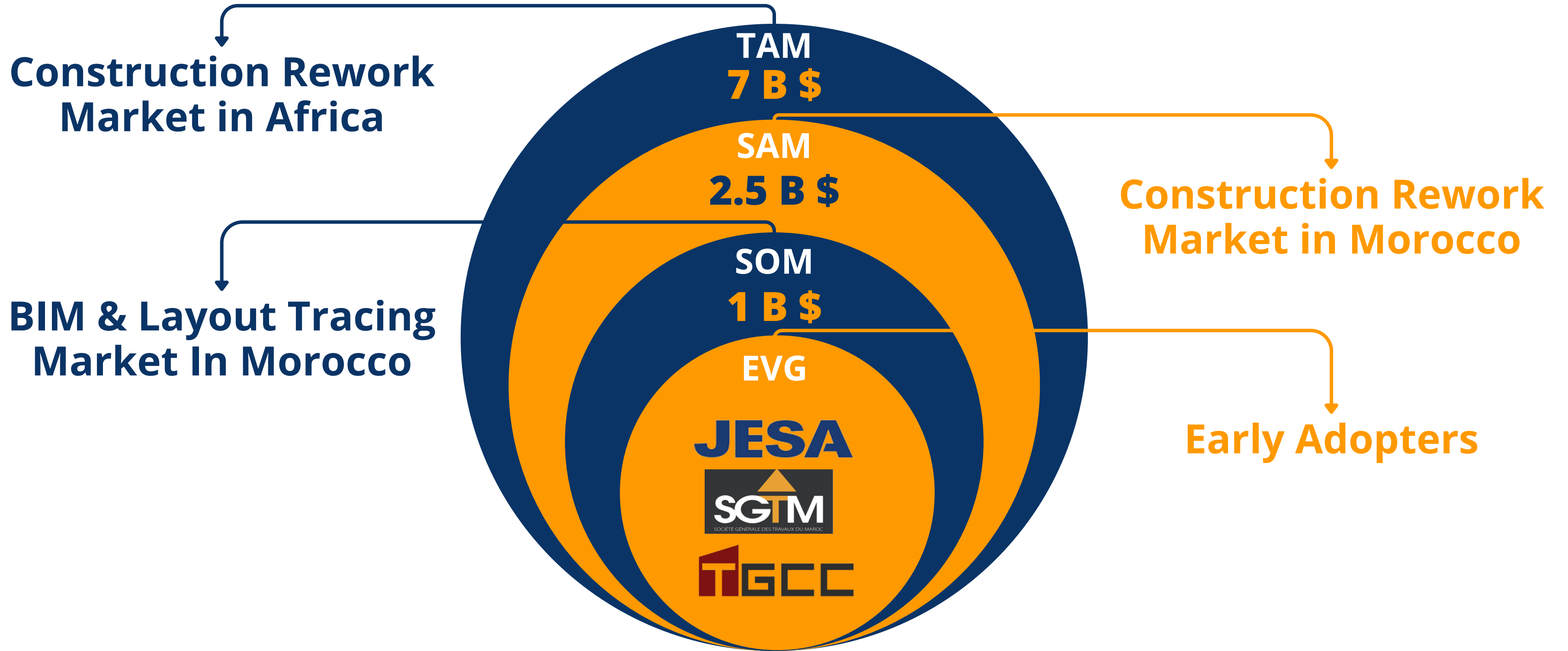
Printing Solution:

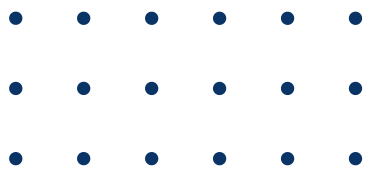


Portable Airbrush

- ### Spray Painting Advantages:
- Enhanced Safety
 - Controlled Precision
 - Surface Versatility

Market Sizing





Wonderful 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 Transformation



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



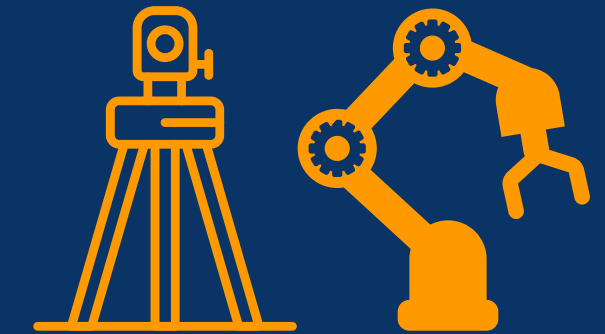
Gather On-site Data



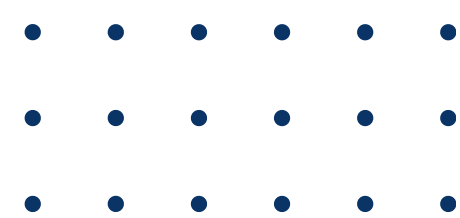
Funding



Hiring Team Members



Robotics Hardware Expenses



COROSOLS
CONSTRUCTION ROBOTIC SOLUTIONS

EXPLORER

UM6P

EMINES
School of Industrial Management

THANK YOU!



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