



Liftians, Inc.

Proposal for ABC LLC.

May 21, 2023



Agenda

Liftians, Inc.

1. Client Needs Identified
2. Liftians Background
3. Liftians Executive Team
4. Liftians Software
5. Robot Specs
6. PDA Option
7. Pricing
8. Robot Calculation
9. Next Steps



Client Needs Identified

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1.Thin Labor Pool

2.Increase Pallet Picking Efficiency

3.Increase Product SKU's



Company Background

Liftians, Inc.

IT ALL STARTED WHEN WE REALIZED WE ARE NOW LIVING IN A WORLD OF INFINITE LEVERAGE.

We are a diverse group with strong backgrounds in Algorithms, System Integration, Data Science, Open source AI systems, and Advanced Robotics. Combined, we have worked at Silicon Valley giants, designing their most critical revenue information systems, such as Recommendation Engines, Enterprise Resource Planning, and Customer Relationship Management, and Business Intelligence.

OUR FOCUS

Customer expectations are changing as new sales outlets are being used. With the application of social media, omni-channel and e-commerce customers now have more price options, selections, delivery methods and shopping experiences. The ability of a business to keep the customer satisfied greatly depends on fulfillment capabilities. Robotic automation can extend the capacity, hours of operation, and life of a DC/FC. Robots are more affordable than ever and increasing wages and lack of available workers makes the economics more attractive and justifiable than in the past.

The future of the warehouse is happening now with robotics.



Executive Team

Liftians, Inc.



Jonathan Huang, CEO and Founder

Broad background in mechanical engineering and computer science across a 30 year career. He specializes in material handling systems and is an expert in business intelligence and machine learning for ecommerce and distribution. Jonathan was the head of Yahoo's product intelligence projects and director of software engineering at Barnes and Noble.

Jonathan Friedman, CTO

Over 15 years of eCommerce, electrical system and warehouse operation. Dr. Friedman has a PhD in Electric Engineering and Computer Science. A seasoned software professional with hands on experience in computer vision, machine learning, robotics, image/signal processing.

Wei Chen, System Architect

Over 25 years of software system design and development. Dr. Chen has a PhD in Applied Mathematics. He is an expert in designing, building, and testing complicated software systems, with a proven track record in the full lifecycle development of robotic systems, from conception to deployment.



Liftians Central Control System

Liftians, Inc.

The Liftians central control system (LCCS) realizes data transmission through wifi and computer network, so as to real time map monitoring, remote dispatching and other functions. The LCCS manages the movements of robots, contains a complex set of algorithms to minimize operators dwell time, a WMS/ERP interface, decides where to move and store each rack.

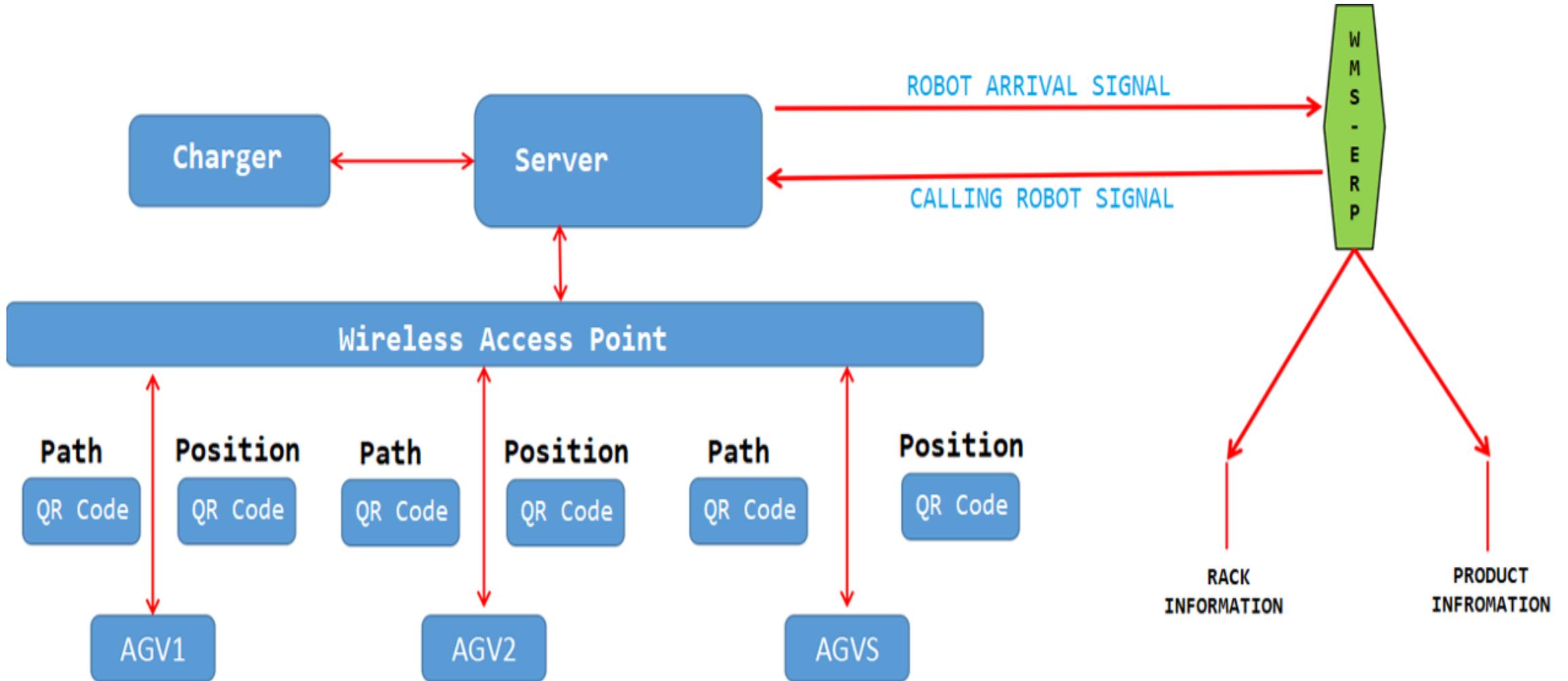
Main Functions of LCCS:

- Real-time information exchange and data transmission with WMS/ERP/Other systems;
- Robot map, navigation, material handling information
- Database functionalities
- Real-time monitoring and alarm information
- Traffic control: Real-time information such as position, status of each robot, complex path finding algorithms to ensure optimal operations
- Communication with external systems
- Integrations with external system and equipment



System Integration

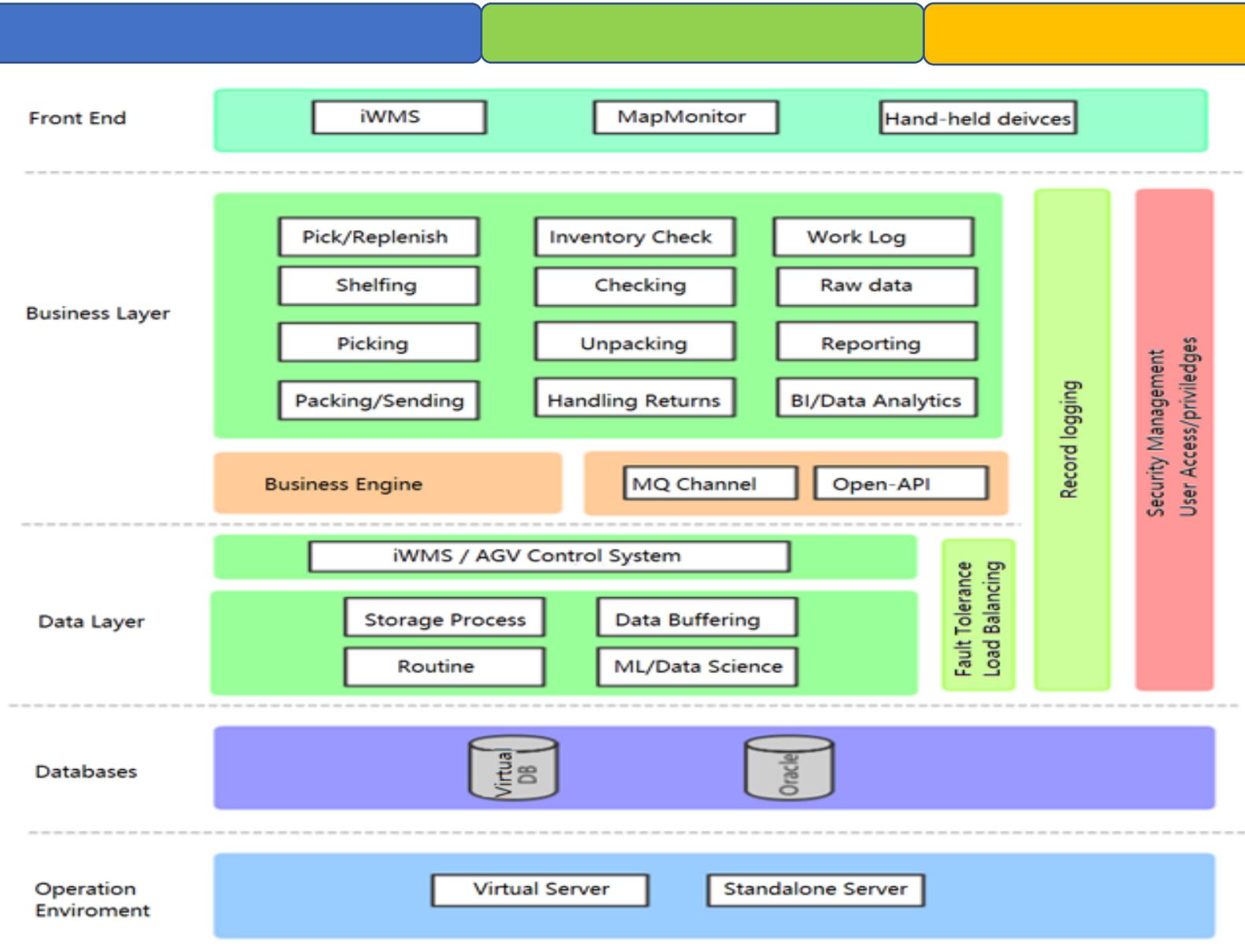
Liftians, Inc.





System Summary

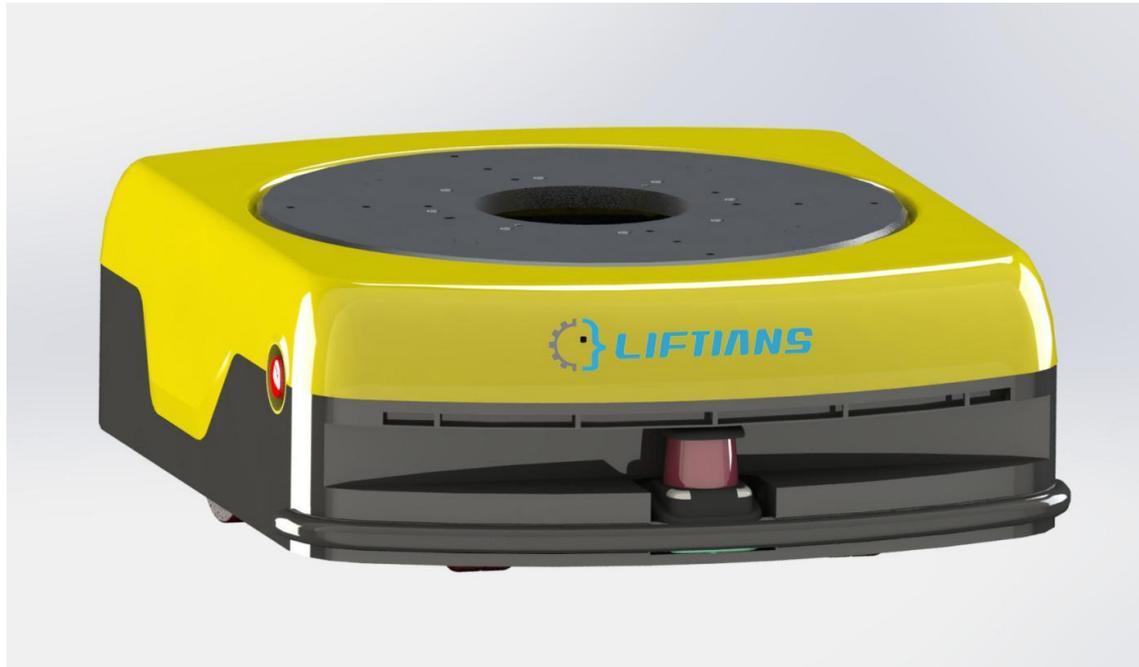
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Robot Specifications

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Robot Specifications:

Model: L-3000

Control: PCB

Size: L 35.5" x W 30.75" x H 12"

Lift Capacity: 2200 lbs.

Battery: 20AH Lithium

Charge Time: 1.5 Hours

Continuous Run Time 8 Hours

* Optional L-5000 with 3300 lbs. lifting capacity



Increase Pick Station Capability

Liftians, Inc.

- Liftians offers hand-held PDA's
 - Benefits:
 - Increase Pick Capacity Quickly for Daily Spikes
 - Screen on Hand-held Functions Like the Pick Station Screen
 - Fully Integrates with Liftians Central Control System



Product Description	Quantity	Liftians Pricing
Robots 1000kg	50	
Charging Stations	7	
Pallet Platforms	1700	
Pick Stations	4	
Hand Held PDA's	5	
Navigation Barcodes	5500	
Wifi Routers	11	
Implementation Consulting Hours	400	
Floor Code Installation	2750	
User Training	2	
Admin Training	2	
Travel and Hotel Costs	3	
Total Hardware/Implementation		
Software Licensing Monthly		
Robot Support/Service Monthly		
Total Support for 5 years		
Total Cost over 5 years		

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Proposal

- Number of Robots: 50
- Number of Platforms: 1700
- Recharge Stations: 7
- 5 Year Full Service Warranty
- Optional 1500kg Robot

Assumptions:

- Outbound Orders/Day 40
- 200 Bins Per Hour Goal
- Lines Picked/Day 12,000
- Avg Qty per line 2
- 2 People Per Pick Station
- Inbound Orders/Day 12
- Lines Picked/Day 500
- Avg Qty for Replenishment: 30,000



Robot Calculation

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1000kg Liftians Needed	
# Raw Movements per Day	24,000
Shelf Hit Rate	1
Order Hit Rate	1.05
Adjusted Movements per Day	22,475
Avg Drive Distance (m)	40
Avg Drive Speed (m/s)	0.5
Avg Drive Time (secs)	156
Raw Drive Mins	31,450
Total Drive Hours per Day	533
Raw Robots Needed	35.5
Utilization Rate	90%
Adjusted Robots Needed	36

Assumptions:

- **Average Driving Distance: 78.1 Meters**
- **Average Driving Speed: .5 Meters/Sec**
- **Raw Driving Hours/Day: 614 Hrs.**
- **14 Hour Work Day**



Warranty and Support

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1. Liftians warranty's all hardware and software for 5 years. Extended warranty beyond 5 years is available simply by extending the monthly fee in 1 to 2 year increments.
2. Warranty covers all parts and maintenance for robots and software updates.
3. 24 hour remote service and support.
4. Yearly on-site maintenance.



Benefits Working With Liftians

Liftians, Inc.

1. Robots developed, tested and ready to deploy.
2. Flexible software integration.
3. Workflow developed for your specific needs.
4. Deployment within 120 days of contract signing.
5. Multiple robot types work with same software.
6. Do not need to be running a WMS or ERP to gain robotic benefits.
7. Flexible picking / packing solutions.
8. Experienced team backing you up.



Next Steps

Liftians, Inc.

1. Review Proposal
2. On-site Visit to ABC LLC
3. On-site Visit to Liftians Customer