

CASE STUDY

El Camino Hospital's TUG Solution At-a-Glance



- 300-bed, state-of-the-art, nonprofit organization serving California's Silicon Valley.
- Multi-specialty acute care facility
- Considered one of the most technologically advanced hospitals in the nation

"Aethon's TUG robots have allowed us to automate over 80 percent of all deliveries – from medications and lab samples to linens and waste management – saving us more than \$650,000 a year in wages and benefits, not to mention workers compensation claims."

*– Ken Graham, CEO
El Camino Hospital*

TUG Robots on the Job

Lab



Pharmacy



AD Hoc Materials



Materials Mgmt Totes/Linens



Trash



Dietary



At El Camino Hospital, 19 TUG[®] robots work alongside staff, helping to make the hospital run more efficiently and cutting costs by \$650,000 a year.

The Situation

El Camino Hospital in Silicon Valley, CA was constructing a new, \$470 million technologically and seismically advanced acute care facility that was due to open in November 2009. Design of the facility focused on quality, efficiency, safety, innovation and enhancement of the patient experience. The hospital would offer 255 private rooms and 45 semi-private rooms and would be the community's state-of-the-art destination healthcare facility.

The Challenge

Because of the sheer size (450,000 sq. ft.) and horizontal layout of the hospital, the distances from one department to another were much farther than in the original hospital the new facility was replacing. This increased the time required for personnel to make the hundreds of day-to-day deliveries of linens, food trays, pharmacy supplies, lab samples, central supply equipment and medical equipment, and also increased the risk of worker compensation-related claims. The hospital calculated that staffing for these continual deliveries and pickups could add as much as \$1 million to annual overhead expenses. Clearly, an efficient, reliable and cost effective solution was needed, and so the hospital turned to its **Center for Technological Innovation** to explore options.



RESPONSE



"A more efficient logistics process enhances clinical outcomes. Our TUG robots are increasing our on-time deliveries and accuracy, and don't mind doing the dirty work that many employees found distasteful, such as picking up soiled linens or hazardous waste materials."

– Ken King
Chief Administrative Services Officer
El Camino Hospital

"Patient satisfaction is critical to our mission. Since our nurses and clinicians no longer have to make runs to pick up or deliver lab samples, equipment or other items, they have more time to deliver patient care. The more 'touch points' that our patients receive throughout their stays, the higher their satisfaction."

– Cheryl Reinking
Chief of Clinical Operations
El Camino Hospital



Aethon improves healthcare efficiency and patient care with innovative logistics, delivery and asset management solutions. Hospitals throughout the United States now utilize Aethon's customized TUG robots in a way that allows them to reallocate and refocus staff on the priorities of their core missions – providing the best patient care possible.

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AUTOMATING LOGISTICS IN HOSPITALS

The Solution

The hospital's Center for Technological Innovation has historically looked at technology from a clinical perspective, and was largely responsible for introducing robotics to assist in surgical procedures. They wondered if robotics might be the right solution for this challenge, and were convinced when they were introduced to Aethon's TUG® – an Automated Robotic Delivery System. The TUG robots were designed to transport scheduled and on-demand hospital deliveries between all ancillary, support and patient care units, enabling staff to focus their time on patient care rather than deliveries. In addition, the Aethon team offered innovative logistics solutions for reengineering a workflow delivery system around the new building's design and infrastructure.



Ultimately, 19 TUG robots were procured to support the hospital's needs. Moving independently around the hospital via specially wired networks, the TUGs carry medical supplies and patient meals, laboratory specimens and prescription drugs, linens and equipment, as well as trash and waste safely through the hospital, verbally announcing their delivery upon arrival at their destinations. El Camino has found that the TUG robots deliver items more efficiently, more accurately and more cost-effectively than other solutions, and optimize staff time to provide patient care. In addition, these robots don't get sick or injured, don't take breaks or vacations, and don't require benefits. As a result, the hospital expects to save \$650,000 this year alone, thanks to their TUG robots.

Next Steps

As El Camino continues to grow to capacity, it will expand the workload of its TUG fleet to additional departments and more applications across the hospital. Future operations will include additional food service deliveries and the implementation of new waste management operations. Aethon's customizable robotic solutions allow for additional build-out of logistics as need increases.

In the first year, El Camino Hospital's TUGs have:

REMOVED **10,200**
TRASH CARTS

SAVED **LAB**
TECHS **4,712** TRIPS

SPENT **4,130** HOURS
PULLING CARTS
WEIGHING
MORE THAN
400 POUNDS

made nearly **12,000** pharmacy deliveries



PUT IN MORE THAN
12,700 HRS

TRAVELED **1|3|3|0|0** MILES