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Supporting Life Science Companies; Develop, Manufacture, 
Register, Launch, and Supply their Products.

LEAN MICROBIOLOGY LABORATORY - CASE STUDY

ISSUE:
The volume of samples to be tested by the micro lab was forecasted to increase by 30% in the 
next 12 months. How could the lab throughput be improved to allow absorption of the extra 
work without any additional headcount?

OBJECTIVE:

Analysis:
Process observation indicated seven basic test categories composed more than 90% of the 
workload. Spaghetti diagrams indicated significant amount of transportation and movement 
waste.

Considerable delays: sample queue time, waiting for available workspace near required utilities 
or equipment

Approach:
Needed to improve the flow of materials / people and minimize delays.

Utilized Muther’s grid analysis & 5S exercise to reorganize work area for greater efficiency using 
existing cabinetry and benches.
**DELIVERABLE:**

Created four U-shaped work cells, each one supporting 1 or 2 of the test categories. Each cell was fully self-sufficient; everything needed was within a few steps which minimized transport and increased the amount of useable space with respect to access to equipment and utilities. This allowed more tests to be completed simultaneously.

- 4 U-shaped dedicated cells
- Localized incubators / refrigerators near cells
- Extra space & fume-hoods for chemistry lab
- Direct access to supervisor’s office
- Increased number of utility access points

Increased lab throughput by 28% (tests per analyst per day). Reduced total space by 12% and reallocated additional space and poorly utilized equipment to the adjacent chemistry lab, offsetting the cost of renovating the micro lab.

**Project Team:** Murray Adams, Principal Consultant Lean Six Sigma

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**CONTACT US**

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