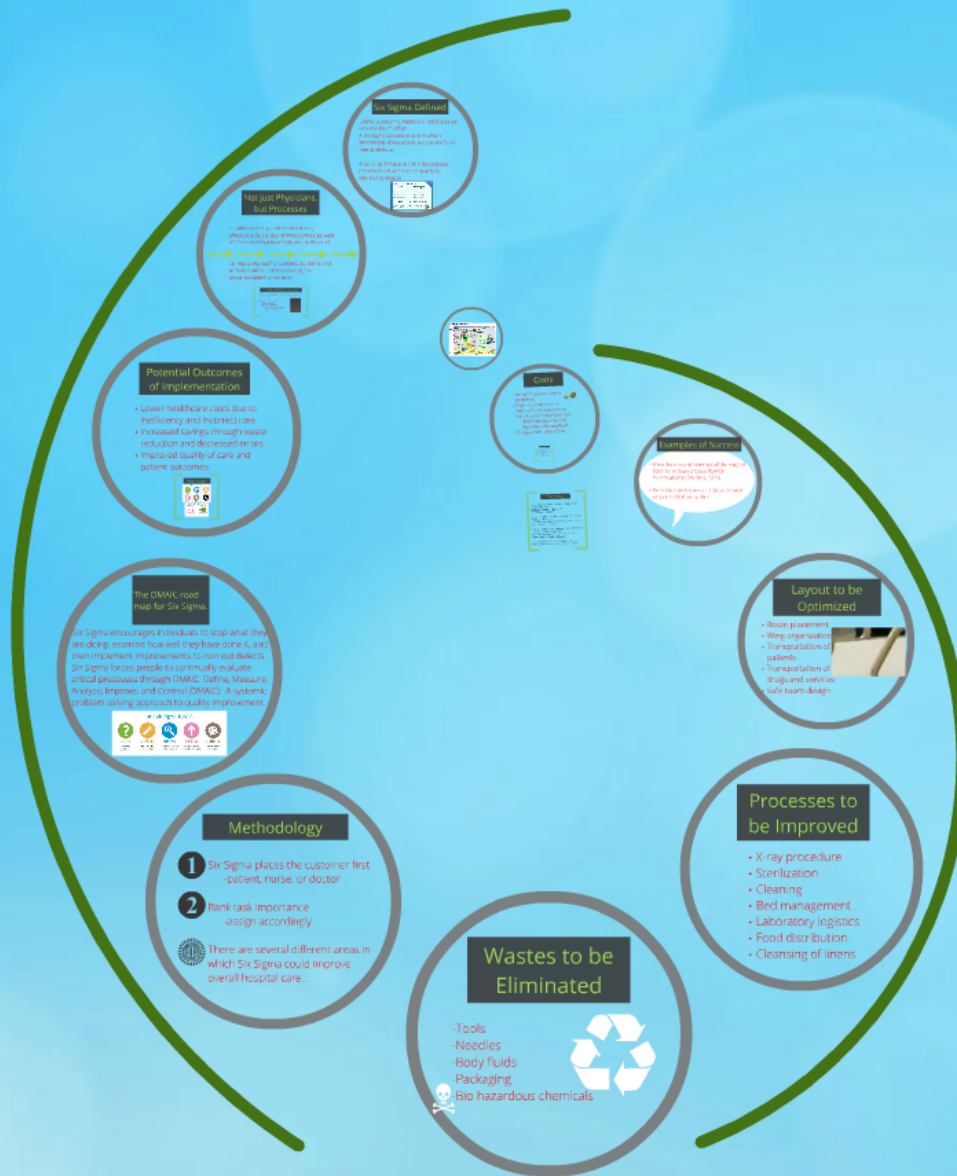


# Six Sigma at Academic Medical Hospital Harvard Case Solution & Analysis



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# Six Sigma Defined

Lean is a systemic method of adding value with minimum effort.

A Six Sigma process is one in which 99.99966% of manufactured products are free of defects.


A set of technique or tools for process improvement and output quality by identifying defects.

What is Lean Six Sigma?

| Lean  | Six Sigma   |
|---|---|
| <ul style="list-style-type: none"><li>Removes Waste</li><li>Increases Speed</li><li>Removes non-value added process steps</li><li>Fixes connections between process steps</li><li>Focuses on the customer</li></ul> | <ul style="list-style-type: none"><li>Reduces Variation</li><li>Improves Quality</li><li>Reduces variation at each remaining step</li><li>Optimizes remaining process steps</li><li>Focuses on the customer</li></ul> |

Speed + Accuracy =

Better Delivery    Better Quality    Satisfied Employees    Satisfied Customers



# What is Lean Six Sigma?

## Lean

- ❑ Removes Waste
- ❑ Increases Speed
- ❑ Removes non-value added process steps
- ❑ Fixes connections between process steps
- ❑ Focuses on the customer

**Speed**

## Six Sigma

- ❑ Reduces Variation
- ❑ Improves Quality
- ❑ Reduces variation at each remaining step
- ❑ Optimizes remaining process steps
- ❑ Focuses on the customer

**Accuracy**

**+**

**=**

Better  
Delivery

Better  
Quality

Satisfied  
Employees

Satisfied  
Customers



## Not just Physicians, but Processes

Healthcare is dependent on not only physicians, but is also an interconnected web of processes that flow from one to the next



By improving such processes, accidents and mistakes will be reduced to only the uncontrollable human error

### Health Care Needs Six Sigma

Errors in health care are common and can yield devastating consequences

Examples of Potential Errors:

- Medicine leakage
- Mixed-up lab results
- Operation on wrong body part
- Unavailable equipment





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# Potential Outcomes of Implementation

- Lower healthcare costs due to inefficiency and incorrect care
- Increased savings through waste reduction and decreased errors
- Improved quality of care and patient outcomes



# Why Change?

## Why Lean Six Sigma?



PROFITABILITY



CUSTOMER  
REQUIREMENTS



EFFICIENCY &  
EFFECTIVENESS



EMPOWER  
EMPLOYEES



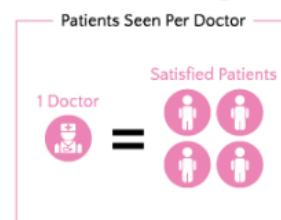
COMPETITIVE  
ADVANTAGE



DATA-BASED  
DECISIONS

## Lean Six Sigma Benefit: Increases Efficiency

Before Lean Six Sigma:



Before processes were improved,  
1 doctor could only see 4 patients successfully.  
Decreased efficiency = less successful patient visits.

After Lean Six Sigma:



After processes were improved,  
1 doctor could see 9 patients successfully.  
Increased efficiency = more successful patient visits.