

# Symposium on Six Sigma Corporations

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## Six Sigma & Southeast Asia Business Environment: Opportunities & Future Prospects

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# Business Environment in Southeast Asia (SEA)

## “Have” Economic Block

- Free & open economy
- High to moderate income per capita
- High FDI flow
- Clean to moderated corrupted government and business community
- Less bureaucracy. High ranking in ease-of-doing-business

# Business Environment in Southeast Asia (SEA)

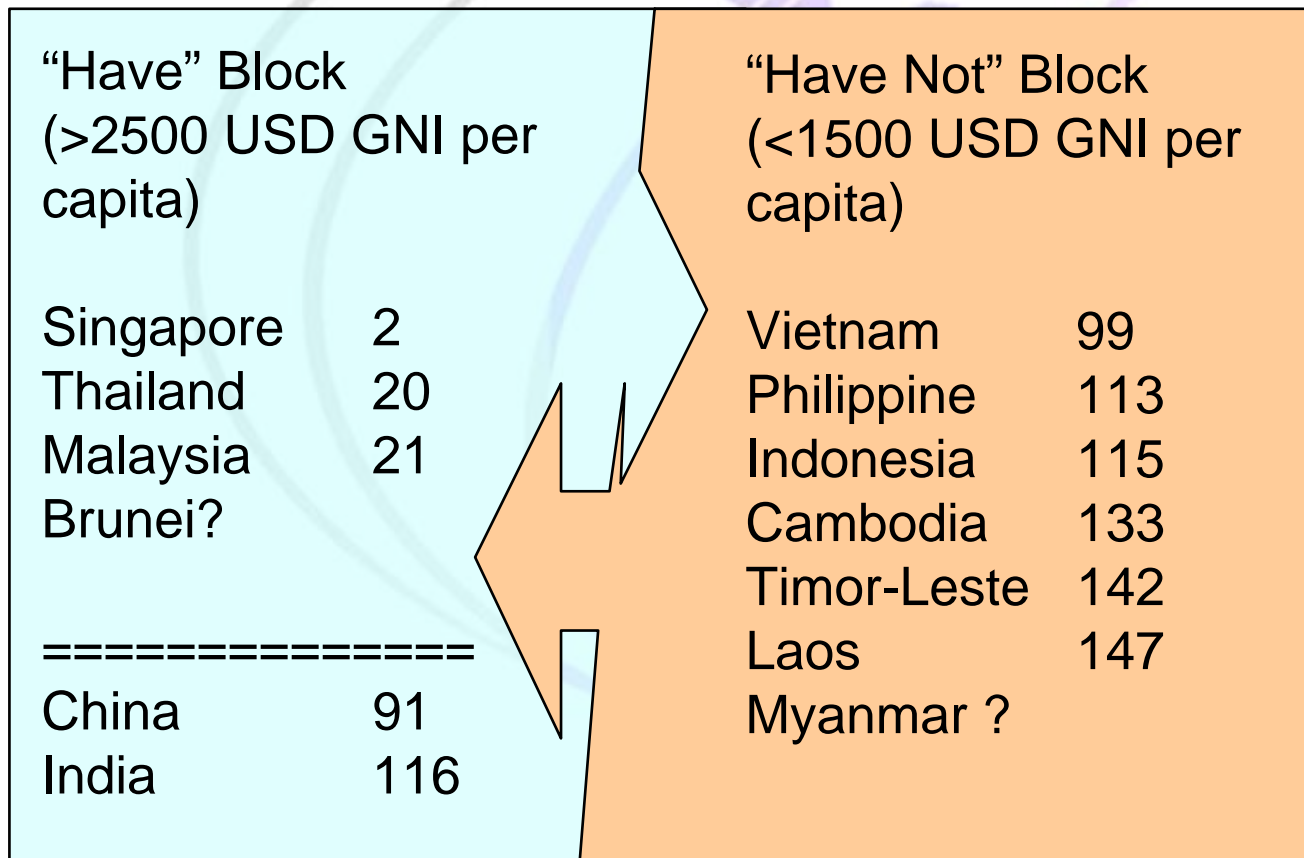
## “Have Not” Economic Block

- Free to central regulated economy
- Moderate to low income
- Low to moderate FDI flow
- Mild to rampant corruption
- Highly bureaucracy. Low ranking in ease-of-doing-business index

# Data Sheet 1: Two Distinctive GNI per capita Blocks

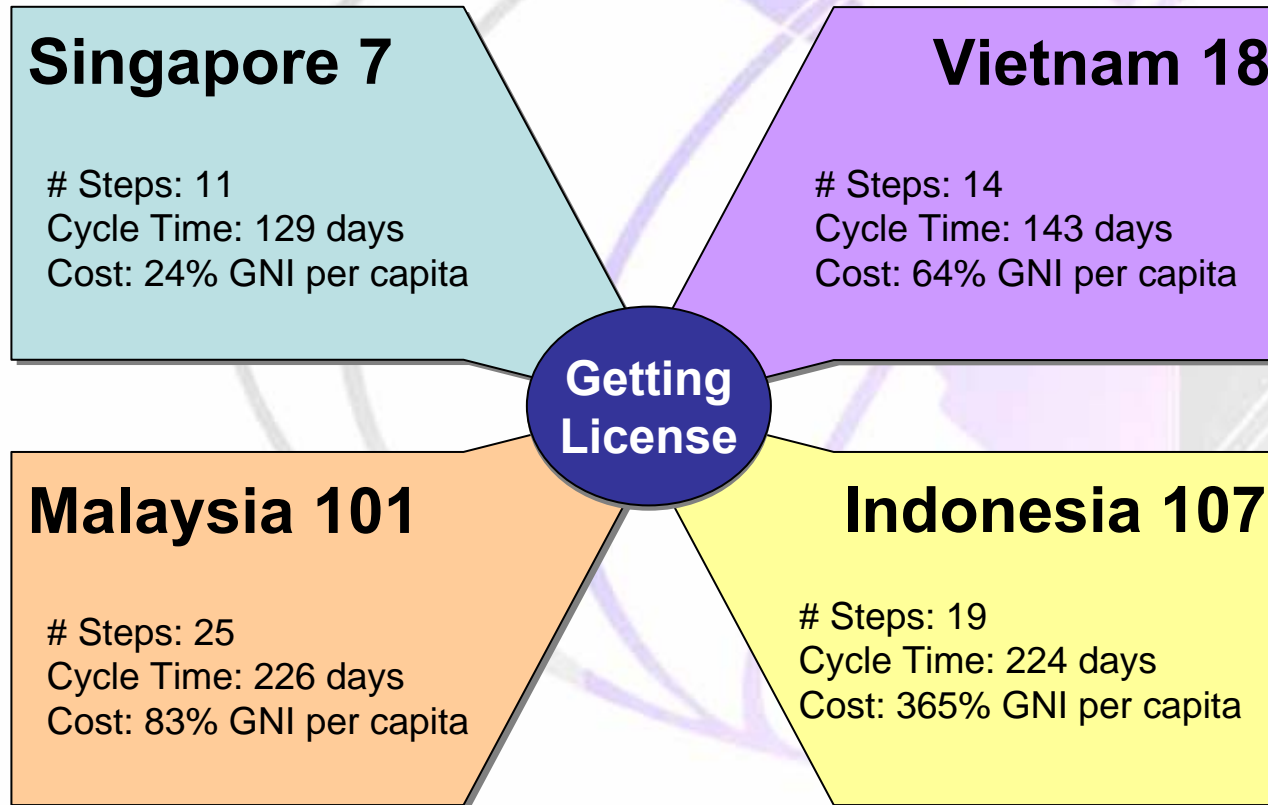
“Have” Block (>2500 USD GNI per capita)		“Have Not” Block (<1500 USD GNI per capita)	
Singapore	24220	Philippine	1170
Brunei ?		Indonesia	1140
Malaysia	4650	Vietnam	550
Thailand	2540	Laos	390
		Timor-Leste	390
=====		Cambodia	320
China	1290	Myanmar ?	
India	620		

# Data Sheet 2: Ease of Doing Business Index 2005



Source: World Bank  
[www.doingbusiness.org](http://www.doingbusiness.org)

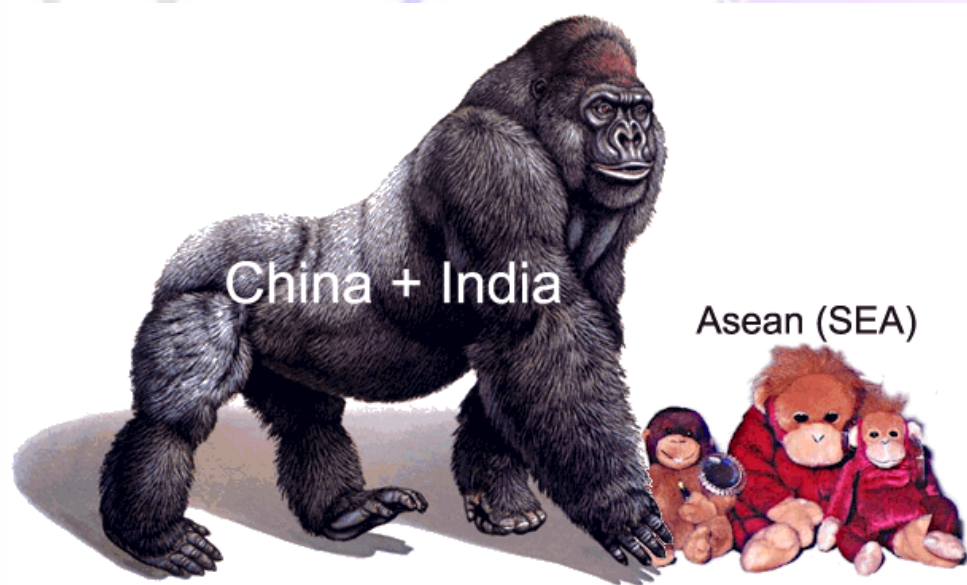
# Data Sheet 3: Getting License for Liability Limited Company



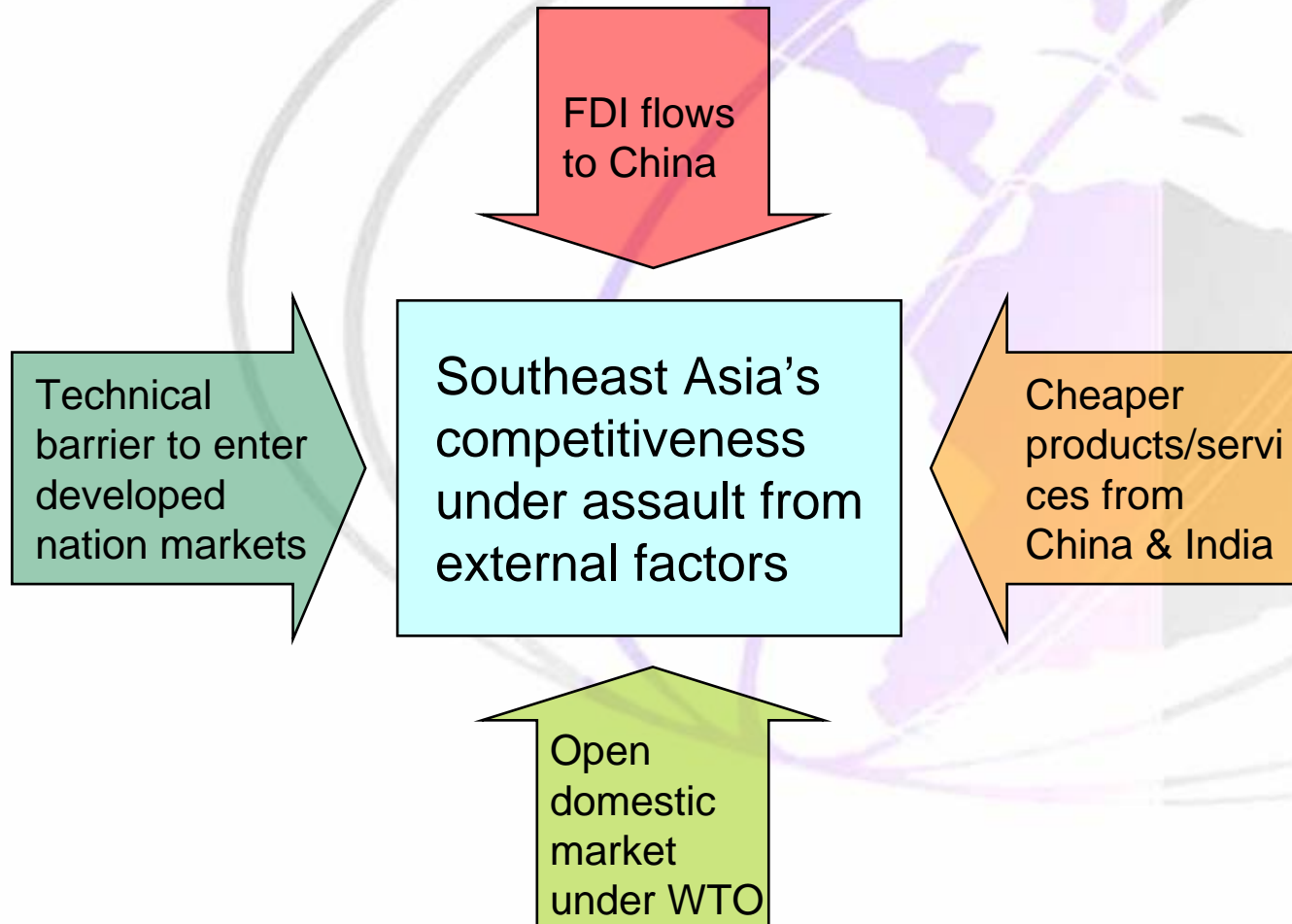
# Business Threats in Southeast Asia

## External Factors

- Stiff direct competition from 500 pounds gorillas (China & India)



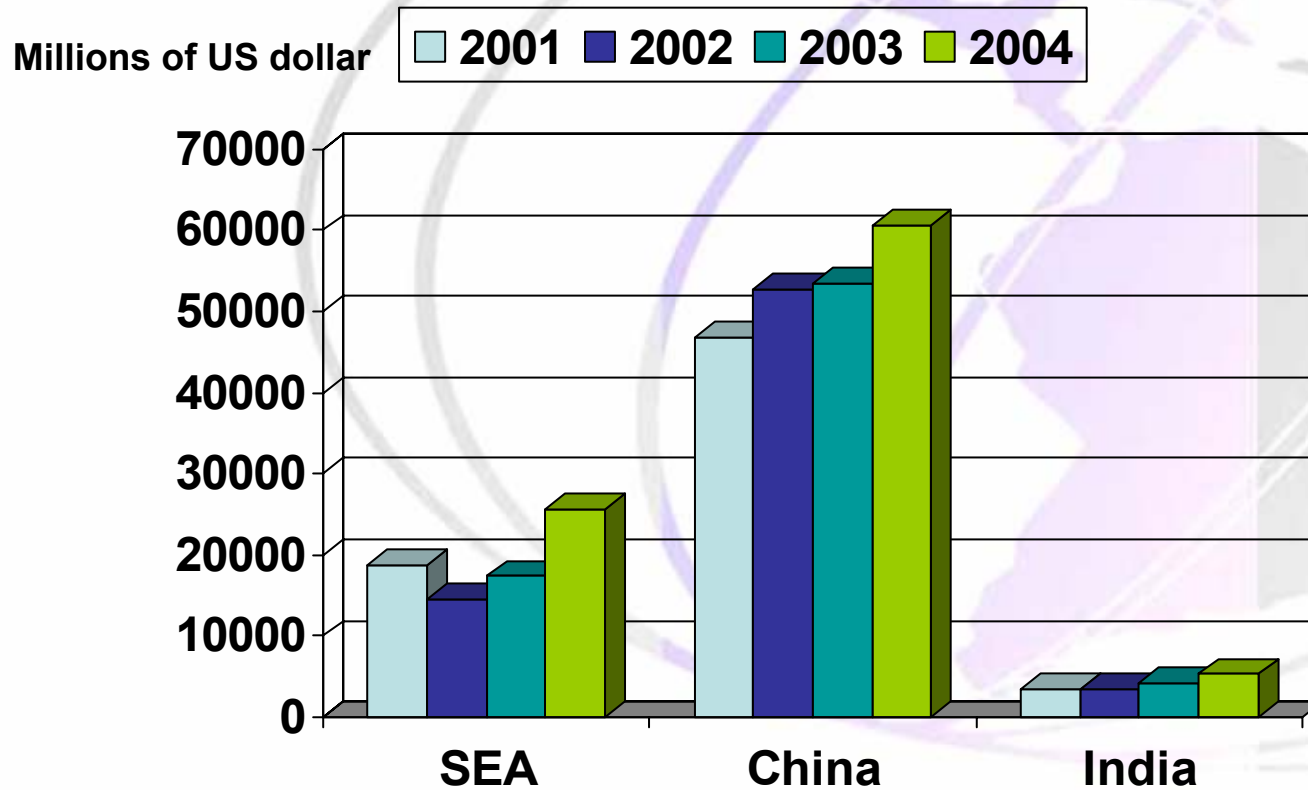
# Business Threats in Southeast Asia



# Data Sheet 4: Growth Competitiveness Index 2005

“Have” Block (>2500 USD GNI per capita)		“Have Not” Block (<1500 USD GNI per capita)	
Singapore	6	Indonesia	74
Malaysia	24	Philippine	77
Thailand	36	Vietnam	81
Brunei	?	Timor-Leste	108
=====		Cambodia	112
China	49	Laos	?
India	50	Myanmar	?

# Data Sheet 5: FDI Inward Flow



# Business Threats in Southeast Asia

## Internal Factors

- Bureaucracy \*
- Corruption, cronyism and nepotism
- Hostile investment policy & labor movement
- Unbalanced development within the country and between the countries.
- Political instability and unrest
- Cultural differences

# What is Six Sigma?

## Definition (Perception)

- Strive for near perfection quality @ 3.4 DPMO
- Process variation reduction methodology
- Root cause elimination
- Statistical thinking problem solving
- Data and fact-based Analysis
- Focus on voice of the customers

# What is Six Sigma?

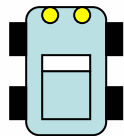
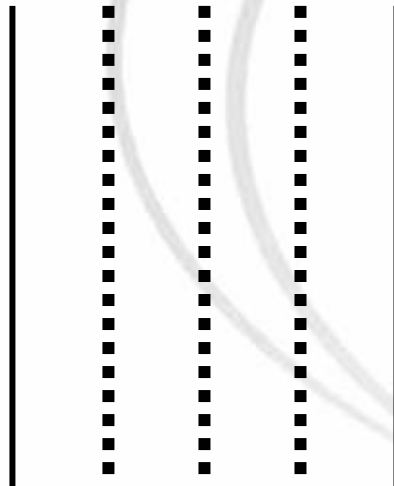
## Definition (Perception)

- Breakthrough improvement
- Continual Improvement/Kaizen Culture change
- DMAIC and DMADV closed loop project management

# What is Six Sigma?

## 6-Sigma Is Better Than 3-Sigma

6-Sigma Highway

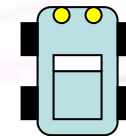
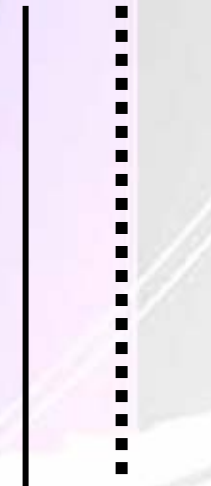


In safety term, 6-sigma highway is less prone to car slip than 3-sigma highway.



In quality term, 6-sigma process is producing less defects than 3-sigma process.

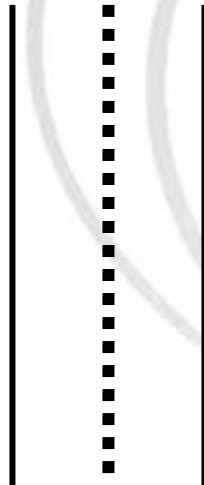
3-Sigma Highway



# What is Six Sigma?

## Reduce Process Variation

### 6-Sigma Highway

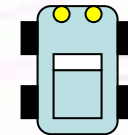
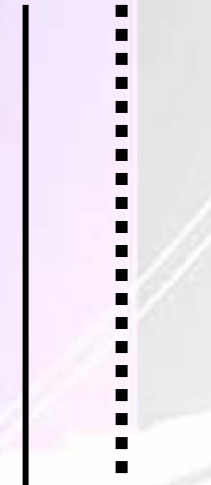


In safety term, widening the highway is a cost prohibitive solution.



In quality term, changing the specification is customer decision and is not easy to get approval. The solution is to reduce process variation to achieve 6-sigma capable process.

### 3-Sigma Highway



# SWOT Analysis on Six Sigma Adoption in Southeast Asia

## Strengths

- As Six Sigma Pioneer with early exposure
- Expert guidance from US and Japan masters
- Engineer well versed in English
- Showcase from early birds
- Good investment climate for “have” nations.

## Weaknesses

- Big economic gap between “have” and “have not” nations
- Insufficient supply of qualified green/black belts
- Engineers weak in statistics and advanced analysis tool
- Six Sigma training cost is high
- Few local trainers
- Low and slow adoption rate
- Lack of support from the government

## Opportunities

- Six Sigma integrated with lean tools
- Apply at service and public sectors
- Leapfrog to world-class players

## Threats

- Resources drained to other formalized quality systems
- Unsustainable for middle and long term
- Business environment no supportive for CI i.e. corruption, short-term profits, etc.
- Big apple from six sigma providers

# The History of Six Sigma Development in Southeast Asia

## First Wave (1987-1995)

- Motorola Malaysia pioneered Six Sigma program in 1987
- Motorola direct suppliers were trained in Six Sigma

# The History of Six Sigma Development in Southeast Asia

## Second Wave (1995-2004)

- Six Sigma was popularized by GE
- Mainly led by multinational & local big companies
- Manufacturing, service and public sectors embrace  $6\sigma$

GE Plastic SG  
Honeywell SG  
DBS Bank SG  
Seagate MY  
Malaysia Airlines MY

Read-Rite PH  
Seagate MY/TH/SG  
Public Services SG  
Mekong Capital VN  
Asia Paper & Pulp IN

# Challenges of Adopting Six Sigma

## Six Sigma Talent Pool

- Manpower skill mismatched
- High outlay of training investment
- Lack of local qualified six sigma trainers who familiar with local management style, culture, language, etc.



# Challenges of Adopting Six Sigma

## Diverse Economy Level

- Limited to “have” countries only
- Lack of infrastructure in “have not” countries

## Government/Management Support

- Resources go to other formalized QMS
- Lack of incentive and promotion
- Unsustainable Kaizen culture
- 6  $\sigma$  as a marketing gimmick

# Challenges of Adopting Six Sigma

## Monopoly Business

- Iron bowl system in the public sector
- Single source of supplier i.e. utility

## Corruption in the Public & Private Sector

- Distorted and bias decision
- Resources are wrongly allocated/wasted
- Mediocrity be tolerant

# Data Sheet 6: Corruption Perception Index CPI 2005

“Have” Block (>2500 USD GNI per capita)		“Have Not” Block (<1500 USD GNI per capita)	
Singapore	5	Laos	77
Malaysia	39	Vietnam	107
Thailand	59	Philippine	117
Brunei	?	Cambodia	130
=====		Indonesia	137
China	78	Timor-Leste	?
India	88	Myanmar	?

# The Future of Six Sigma Development in Southeast Asia

## Third Wave (2005 - ??)

- Propagating to more service companies and public sectors
  - Financial services
  - Healthcare
- Extending to a whole supply chain.
  - Suppliers for Six Sigma customers
  - Supporting services, i.e. R&D, HR, Finance, etc.
  - Retailers

# The Future of Six Sigma Development in Southeast Asia

## Third Wave (2005 - ??)

- Beyond Six Sigma
  - Complemented with Lean
  - Innovation

# What is Lean Six Sigma?

## Lean Enterprise

### Speed + Low Cost

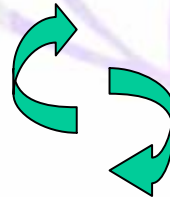
- ◆ Reduce waste and increase process speed
- ◆ Identify non value and steps and cause of delay
- ◆ Kaizen events

## Six Sigma

### Culture + Quality

- ◆ Improve performance on customer CTQs
- ◆ Use DMAIC with TQM tools to eliminate variation
- ◆ Management engagement, 1% dedicated as Champions and Black Belts

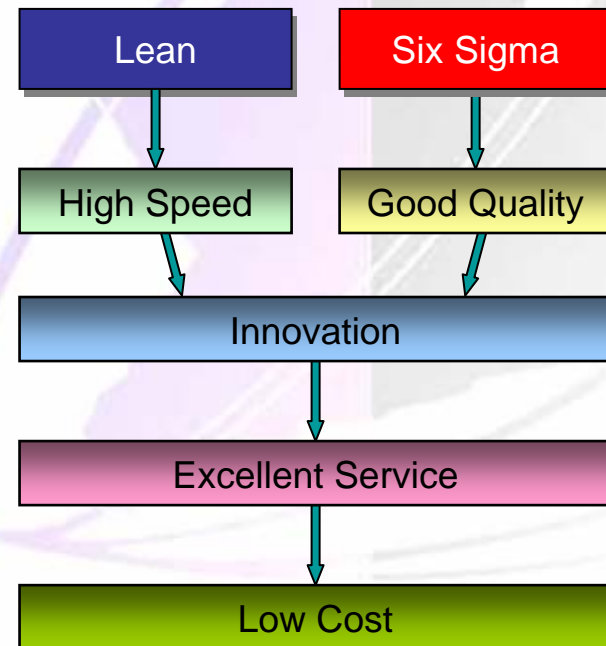
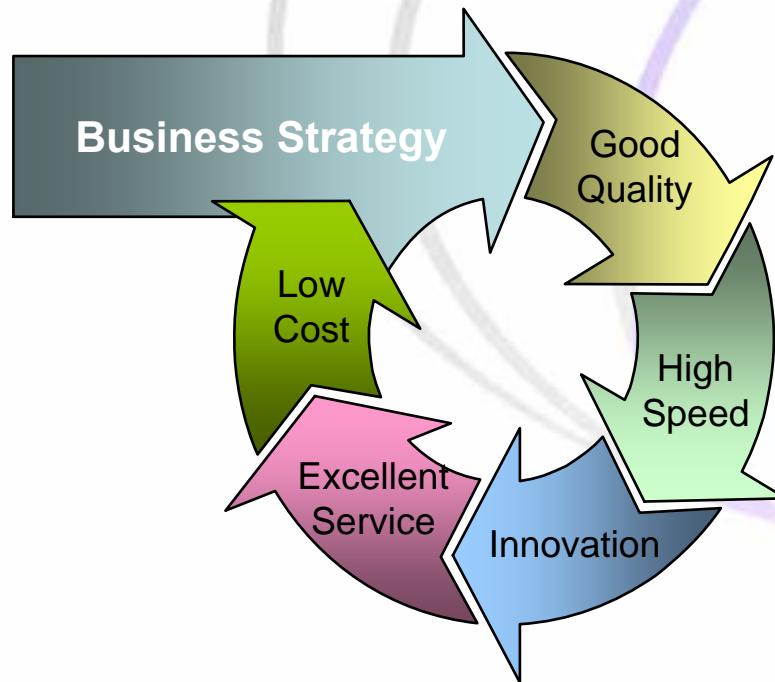
Lean Speed Enables  
Six Sigma Quality  
(Faster Cycles of  
Experimentation/learning)



Six Sigma Quality Enables  
Lean Speed  
(Fewer Defects Means  
Less Time Spent on Rework)

# Why Lean Six Sigma?

Seamless integration of both world - class best practices



# Lean Six Sigma: Opportunities & Future Prospects

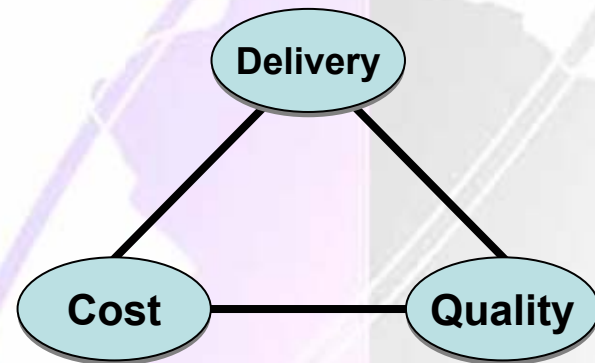
## Macro Level

- Improve business & investment climate
  - Easy-of-doing business index
  - Growth competitiveness index
- Improve public sector efficiency & effectiveness
- Improve public safety
  - Road accident
  - Healthcare

# Lean Six Sigma: Opportunities & Future Prospects

## Micro Level

- Improve a company's operational effectiveness
  - Cost Reduction
  - Zero defect quality
  - On-time delivery
- Great customer service
  - Customer satisfaction & retention
  - Market share





# Questions and Answers

Every question is good question!

# Appendix 1: Ease-of-doing-business index components

1. Starting a business
2. Enforcing contracts
3. Hiring and firing workers
4. Getting credit
5. Closing a business
6. Registering property
7. Protecting investors
8. Getting licenses
9. Paying taxes
10. Trading across borders