

Gaskets Don't "Fail".....

Your Gasket-Use Process Fails

**How Do You Improve Your Process?**

# Six Sigma Review

Sigma Level	Defects Per Million Opportunity
3	66,811
4	6,210
5	233
6	3.4

← Typical

← GOAL

Six Sigma Gasket-Use Process Control

= 3.4 Leaks/Million Opportunities

Typical Chemical Process Facility:

100 leaks or flange maintenance issues/year

20,000 flanged connections

= 5,000 Leaks/Million Opportunities

= ~4.1 Sigma

## Gasket-Use Process:

Specification

Sourcing

Fabrication/Supply

Inventory Management

Selection

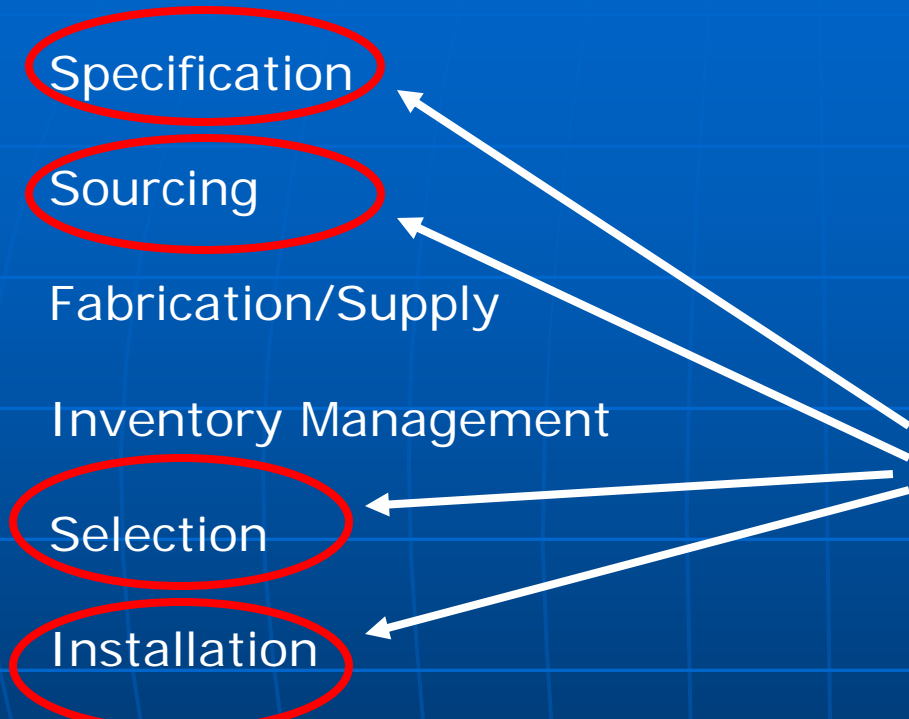
Installation

Equipment Start-Up

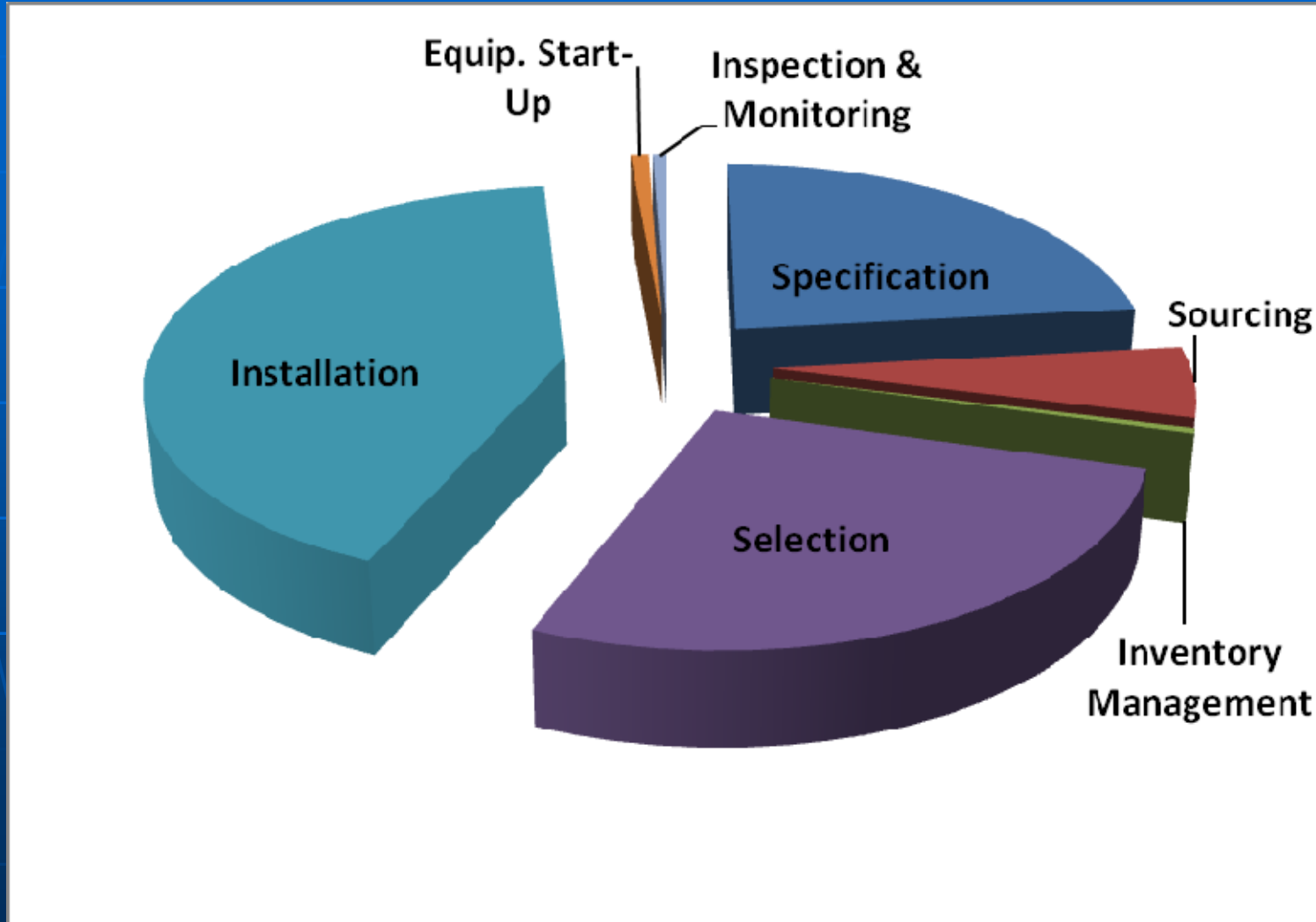
Inspection & Monitoring

Six Sigma Greenbelt Project at  
Major Chemical Processing Facility:

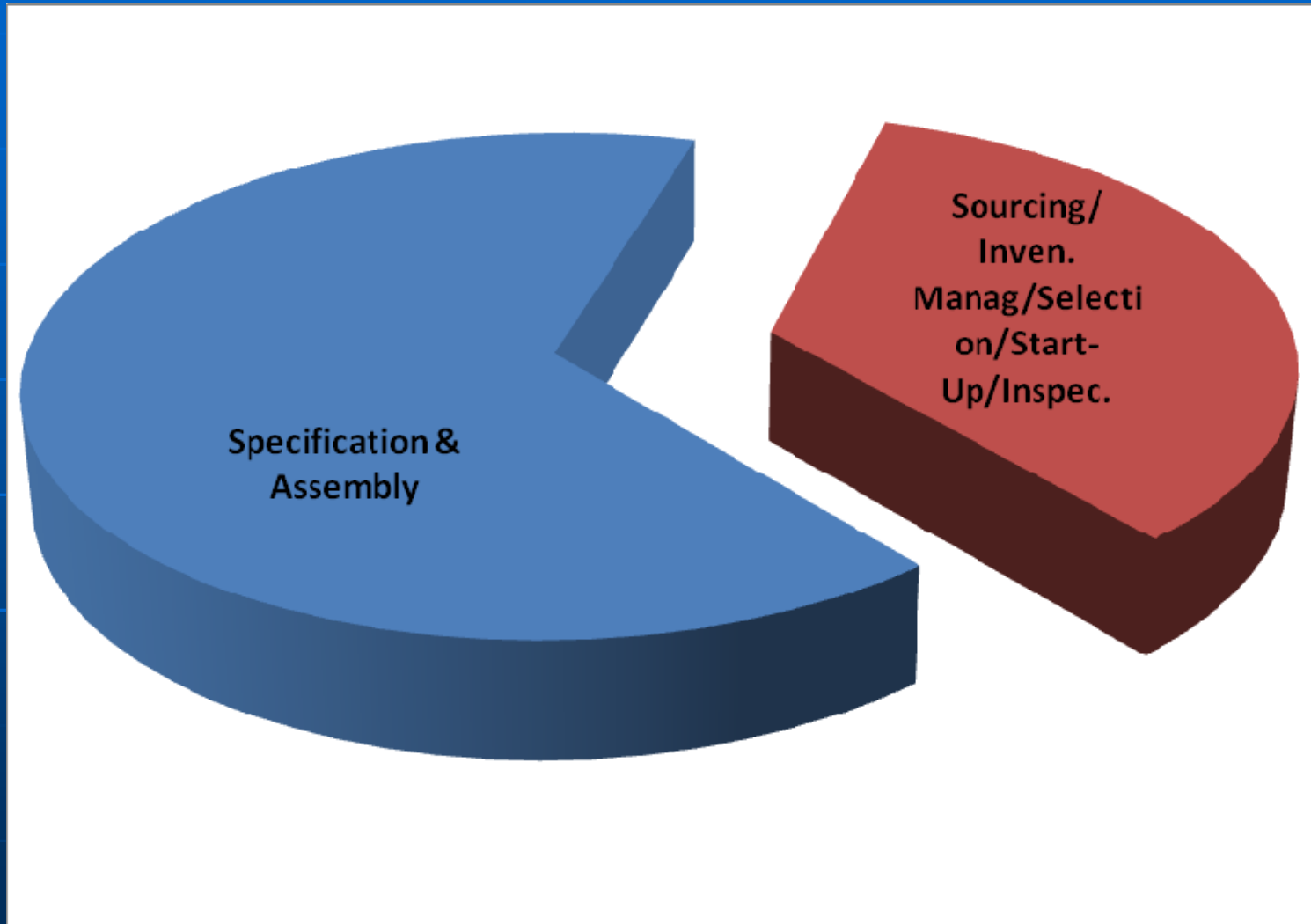
4 Most Critical Process Steps



# Cause/Impact Of Process Steps



# Controlling Specification and Assembly Steps Eliminates 68% Of Risk/Cause



# Successful Sealing Performance of Bolted, Flanged Connections

Maintenance  
&  
Engineering

## Gasket Material Selection/Specification

- Chemical Compatibility
- Min/Max Load
- Suitable For Flange

## Bolting

- Adequate For Gasket Compression
- Avoid Over-Compression Of Gasket

## Assembly

- Method & Tools
- Training
- Torque Values/Procedures

## Information/Change Management

- PSM
- Available
- Current
- Accurate

# Successful Sealing Performance of Bolted, Flanged Connections

Sourcing

## SAP/Purchasing Software

- Accurate Descriptions & Full Detail
- Current

## Supplier

- Part Of Checks & Balance