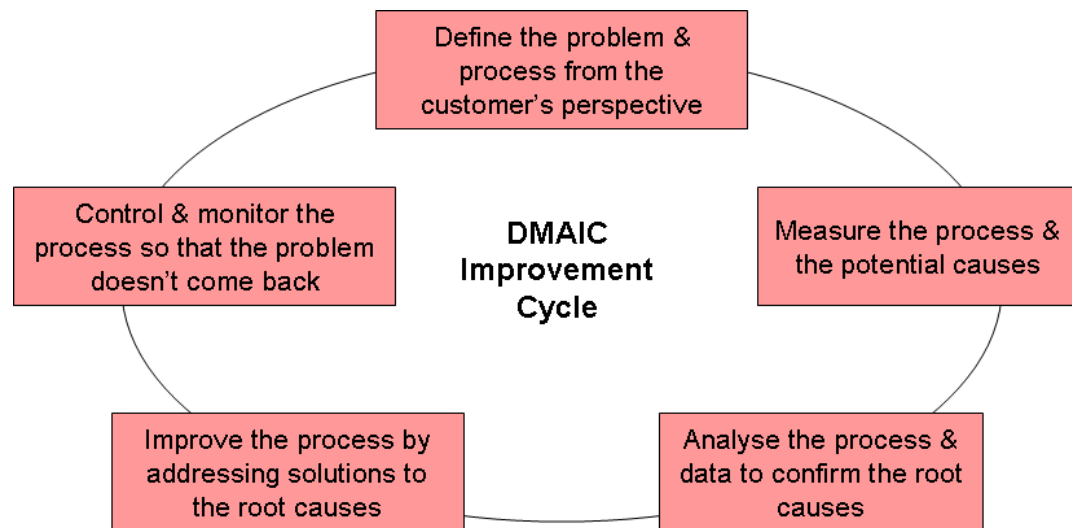


# Six Sigma: Where does it fit in today's process improvement world?

Anita Cunningham  
Quality Business Services  
May 13, 2008

# What is Six Sigma?

- A structured quality and process improvement methodology that enables you to look at existing processes, prioritise the factors that limit current performance and implement solutions to achieve significant sustainable improvements.



## Is Six Sigma a Fad??

- Solves problems through root cause analysis
- Uses process thinking and analysis
- Necessitates understanding of customer and stakeholder requirements such as service, product quality, cost, speed
- Structured and repeatable methodology that utilises a common suite of tools and techniques that have been around for decades.

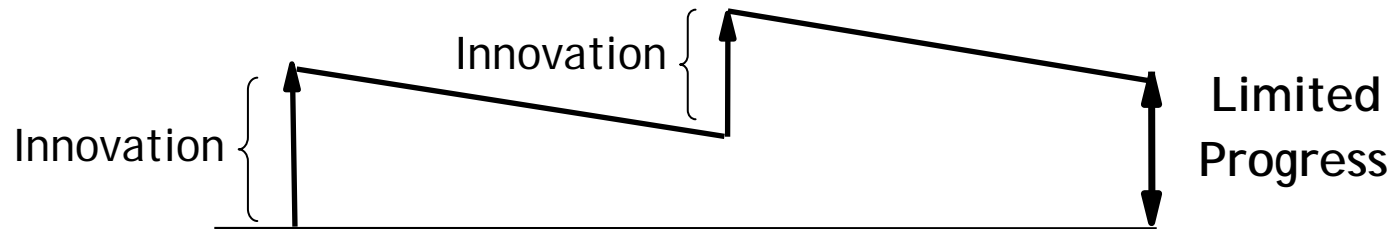
No ... but the name may become unfashionable!

# Thesaurus

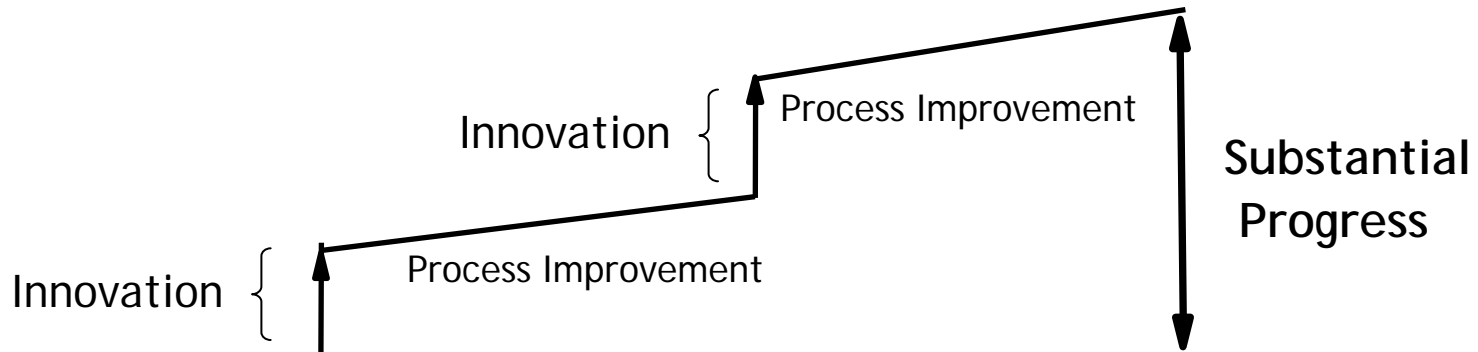
- Process improvement
- Continuous improvement
- Business excellence
  - Clear direction
  - Agreed plans
  - Customer focus
  - Improve processes
  - Involve people
  - Continual learning
  - Systems thinking
  - Use data effectively
  - Understand variation
  - Community impact
  - Stakeholders value
  - Role-model leadership
- Quality management

# Is Process Improvement a Fad??

## INNOVATION ALONE



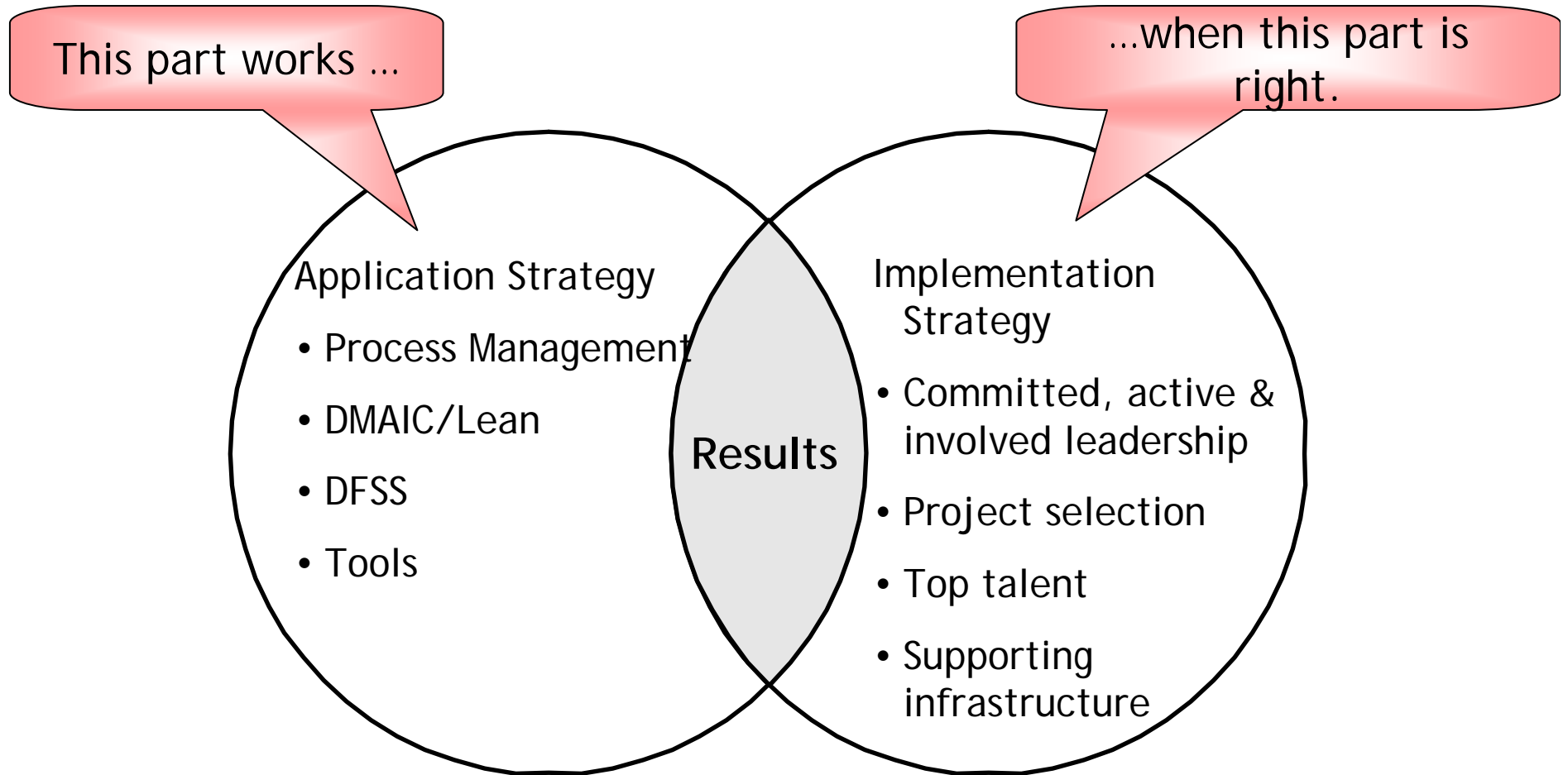
## INNOVATION AND PROCESS IMPROVEMENT



## So Why Do Improvement Projects Still Fail?

- Poor scope- unclear goals
- Duplication or overlap with other initiatives
- Lack of senior sponsorship & support
- Inadequate resourcing
- Lack of alignment to business objectives & key drivers
- Changing business priorities
- Lack of stakeholder buy-in
- Jump to solution
- Focus on technical design at expense of change acceptance

# Failure Usually Due to Implementation Issues.



## Observations of Australian Businesses

- “Can’t afford it.” “We don’t need to be at 3.4 defects per million.” - poor understanding
- Don’t ‘think process.’ - “We don’t make fridges!”  
Have not made the connection between finance and process performance,
- Poor at leading change - short term focus, initiative overload, do as I say (not as I do)
- Reactive - manage point data. Unable to see big picture.
- Loads of data - no knowledge

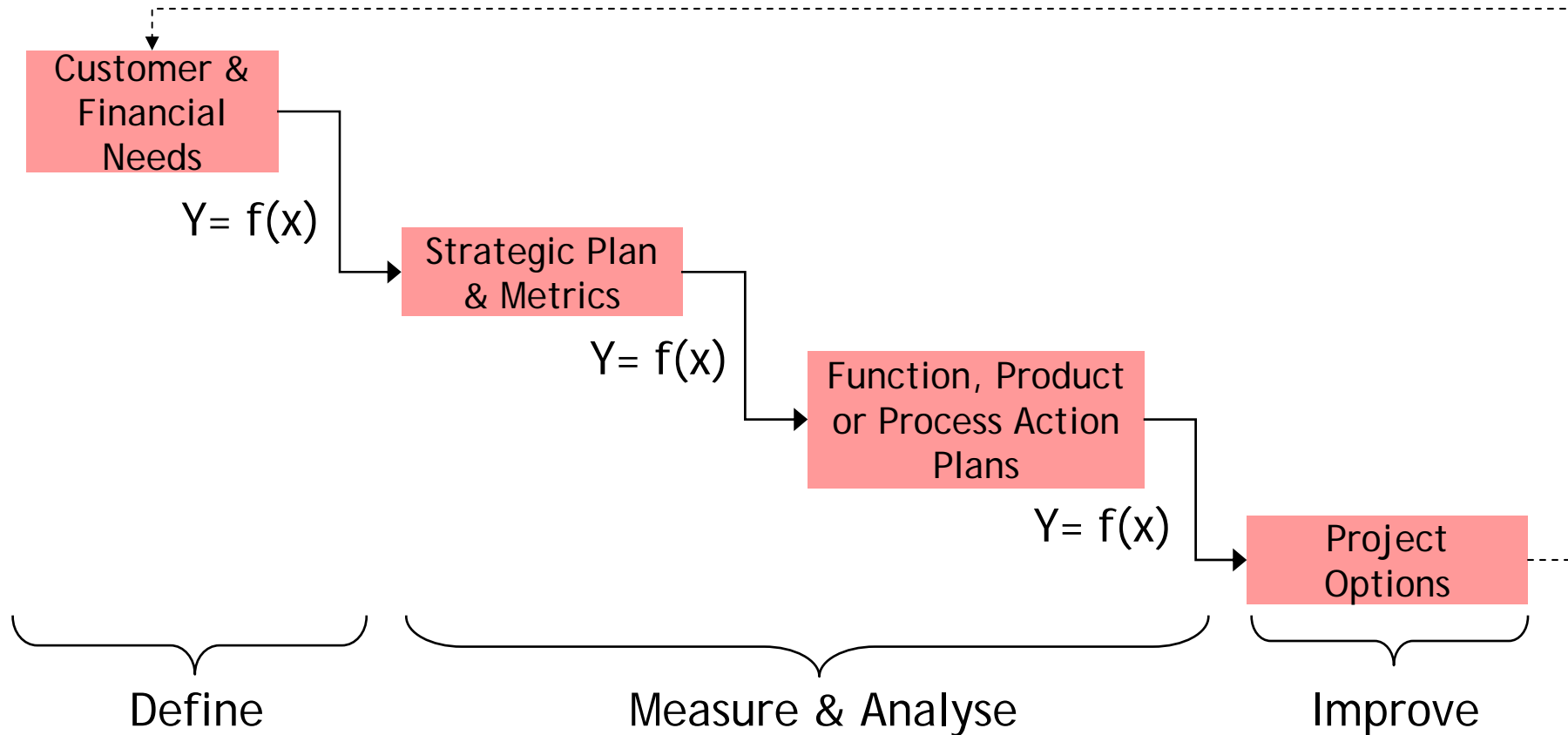


# Six Sigma Lessons Learned

- Don't supersize projects
- Don't get stuck on certification and statistics
- Don't do six sigma 'just because'
- Don't start until senior leadership is onboard
- Don't stray from strategic priorities
- Don't short change executives on training
- Don't delay six sigma with other initiatives
- Don't neglect process management
- Don't expect success without top-down commitment
- Don't let mistakes derail you

# Process Improvement Delivers the Strategy

Control = ongoing review



# Six Sigma or Lean?

## Six Sigma

Drives defect reduction  
leveraging analytical  
techniques

For complex problems with  
unclear root causes or  
design solutions

Reduce process variation,  
increase yield and shift  
process centre

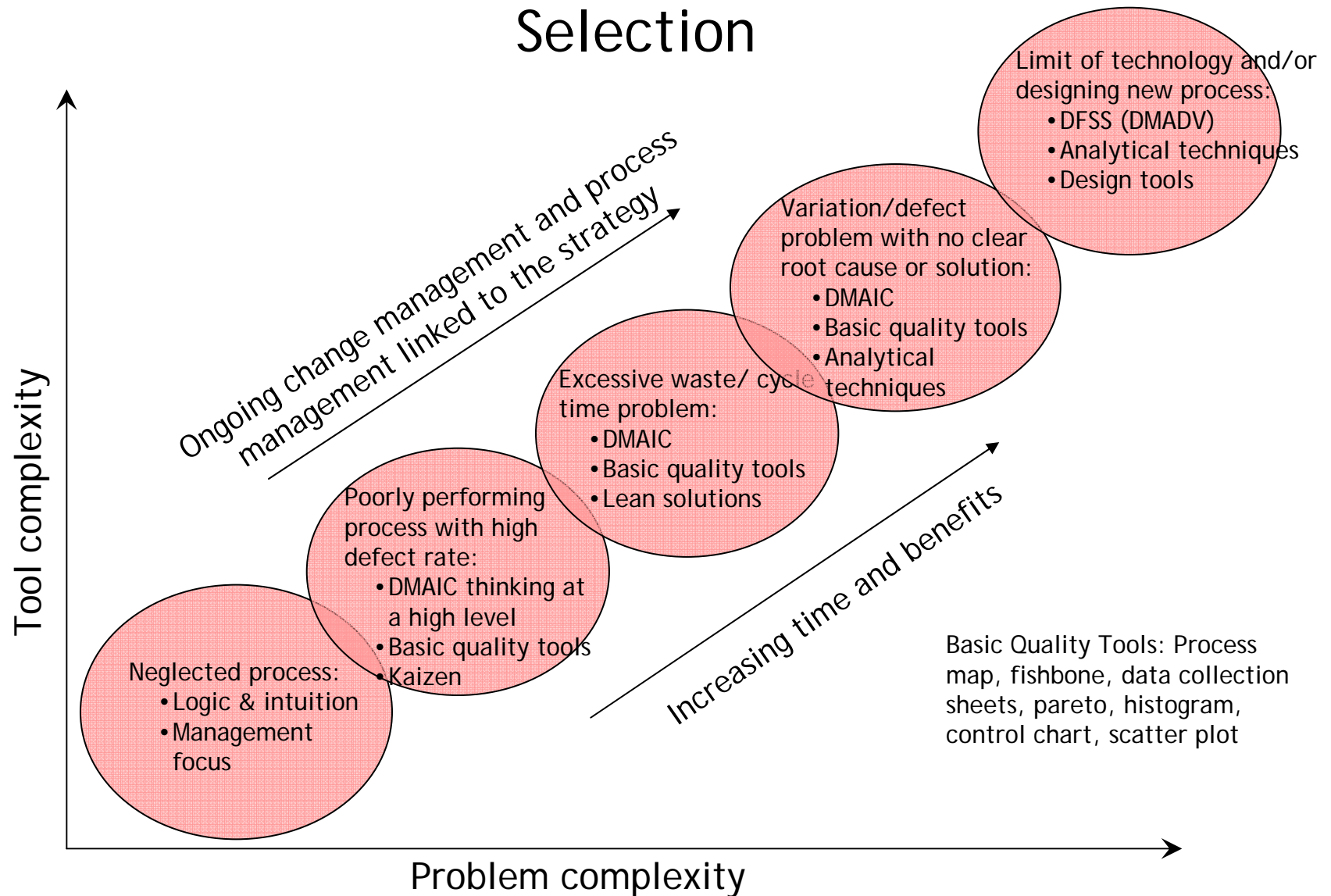
## Lean

Drives cycle time reduction  
leveraging proven solutions

Maximises customer  
responsiveness with  
minimum resources

Reduce waste and increase  
velocity

# Problem Complexity Drives Tool & Methodology Selection



## The Bare Essentials

- Leadership must understand & be actively involved
- Do the business case before starting - need full-time improvement resource(s)
- Start with a 'Kaizen' approach on some persistent problems to engage and get some quick wins
- Manage and improve strategic business processes
- 80/20 rule: 15-20 tools will cover 80% of situations!
- Don't skip the change management skills

# Core Tools or Techniques

- Project charter/scope
- Stakeholder analysis
- Operational definition
- Process map (high level and detailed)
- Cause & effect diagram
- Measurement system analysis
- Multi-voting
- Brainstorming
- Payoff matrix
- Histogram
- Run chart
- Capability (DPMO)
- Scatter plot
- Simple regression
- Box plot
- Mood median test
- Levene's test
- Pareto chart
- Chi-square test