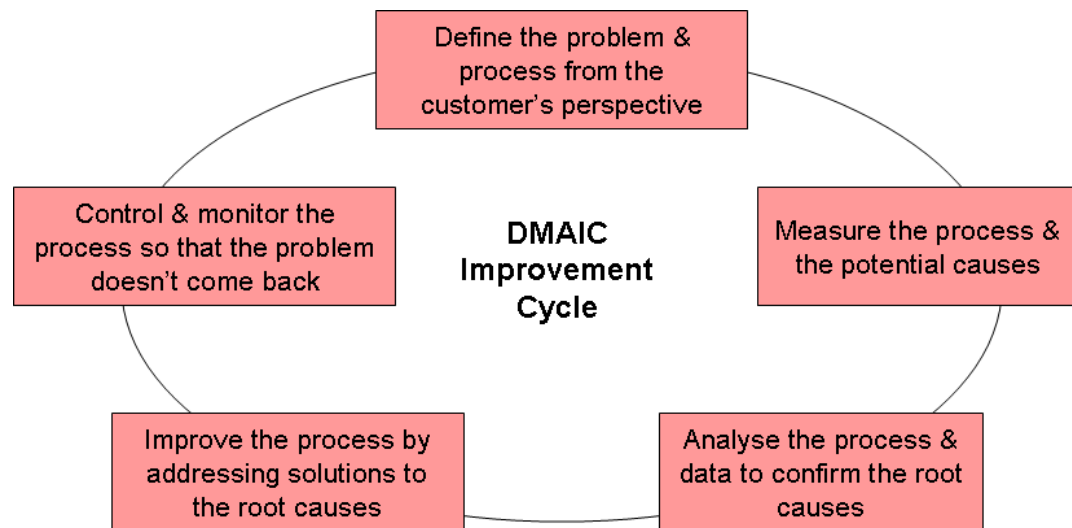


Six Sigma: Where does it fit in today's process improvement world?

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.

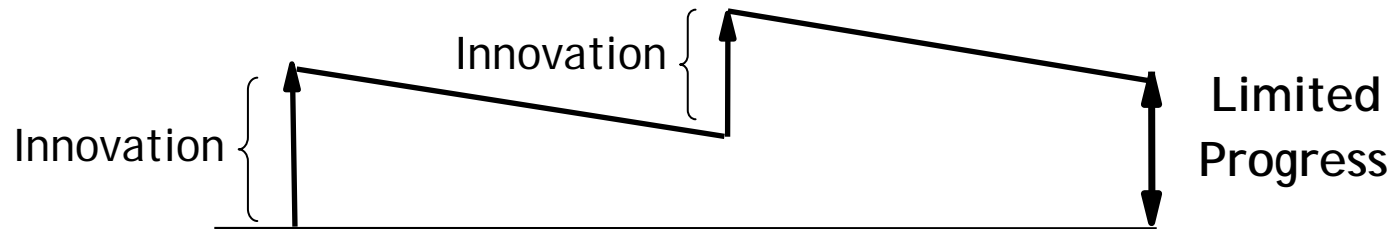
No ... but the name may become unfashionable!

Thesaurus

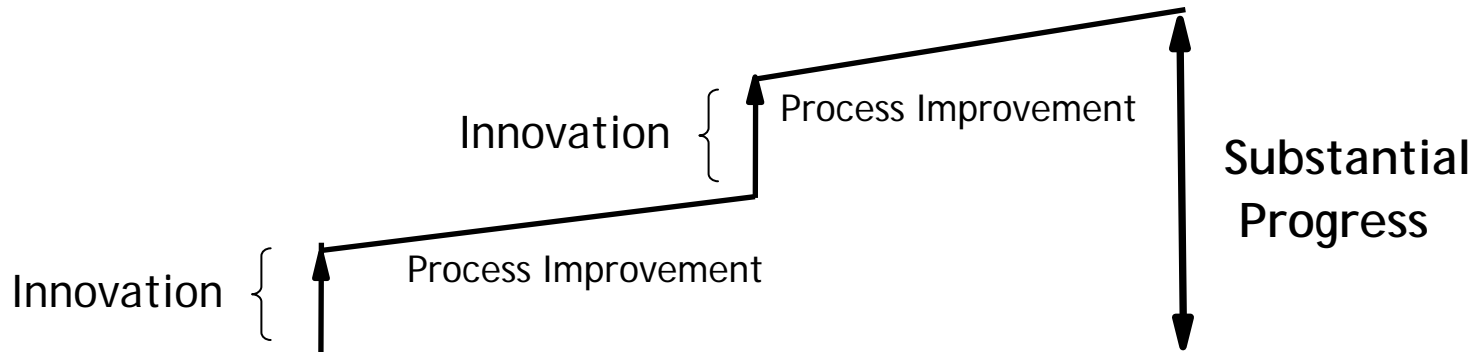
- Process improvement
- Continuous improvement
- Business excellence
 - Clear direction
 - Agreed plans
 - Customer focus
 - Improve processes
 - Involve people
 - Continual learning
 - Systems thinking
 - Use data effectively
 - Understand variation
 - Community impact
 - Stakeholders value
 - Role-model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

Is Process Improvement a Fad??

INNOVATION ALONE



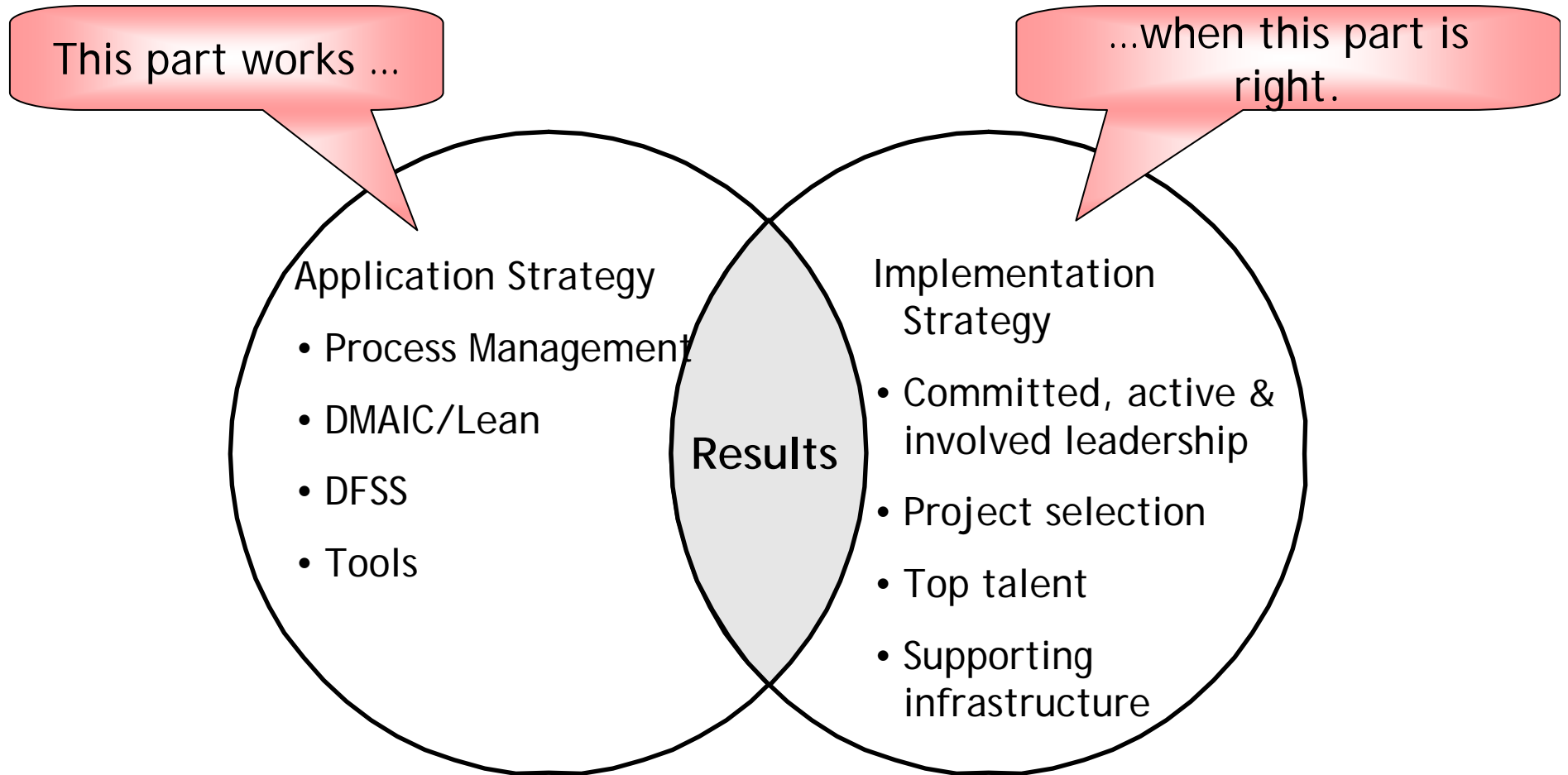
INNOVATION AND PROCESS IMPROVEMENT



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

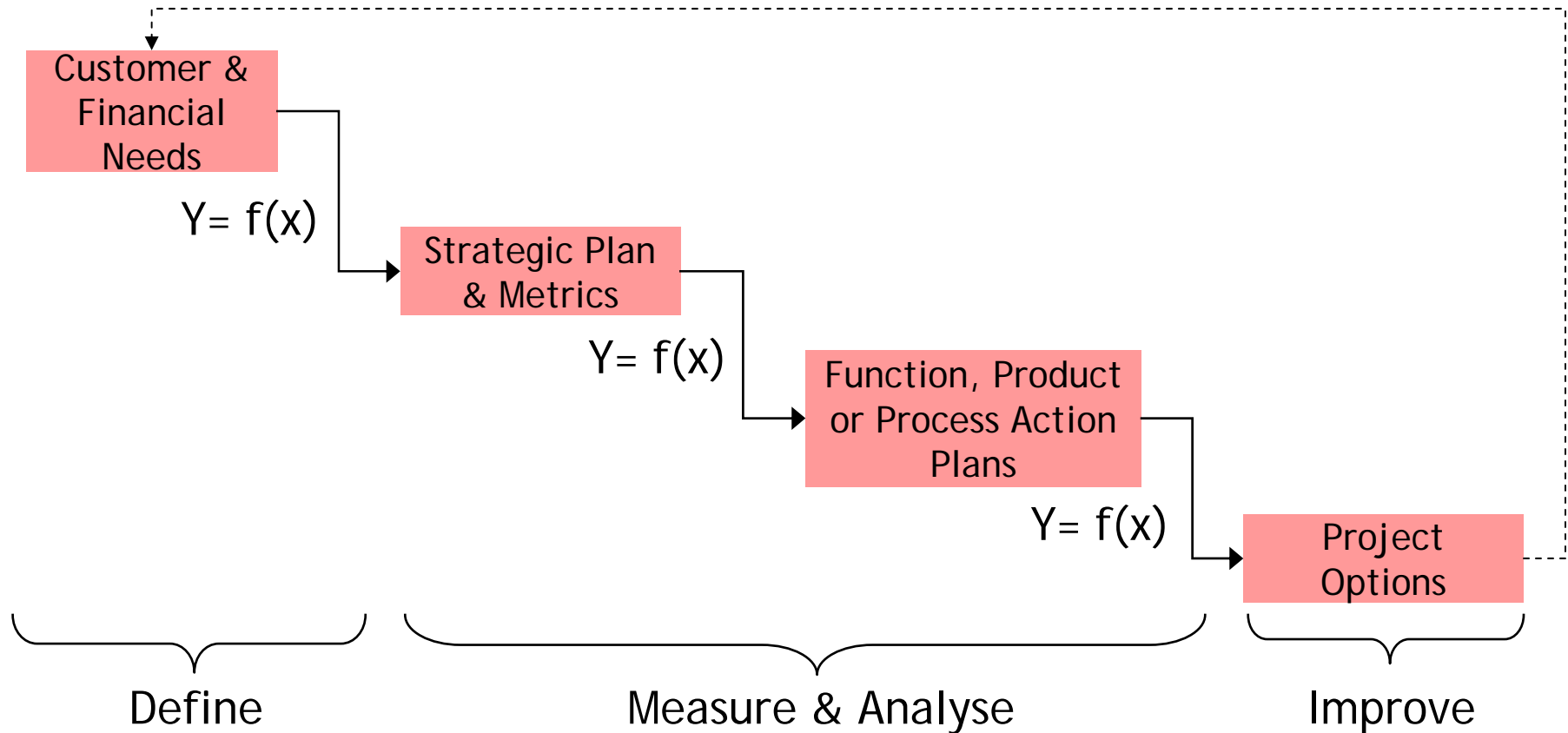
- “Can’t afford it.” “We don’t need to be at 3.4 defects per million.” - poor understanding
- Don’t ‘think process.’ - “We don’t make fridges!”
Have not made the connection between finance and process performance,
- Poor at leading change - short term focus, initiative overload, do as I say (not as I 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

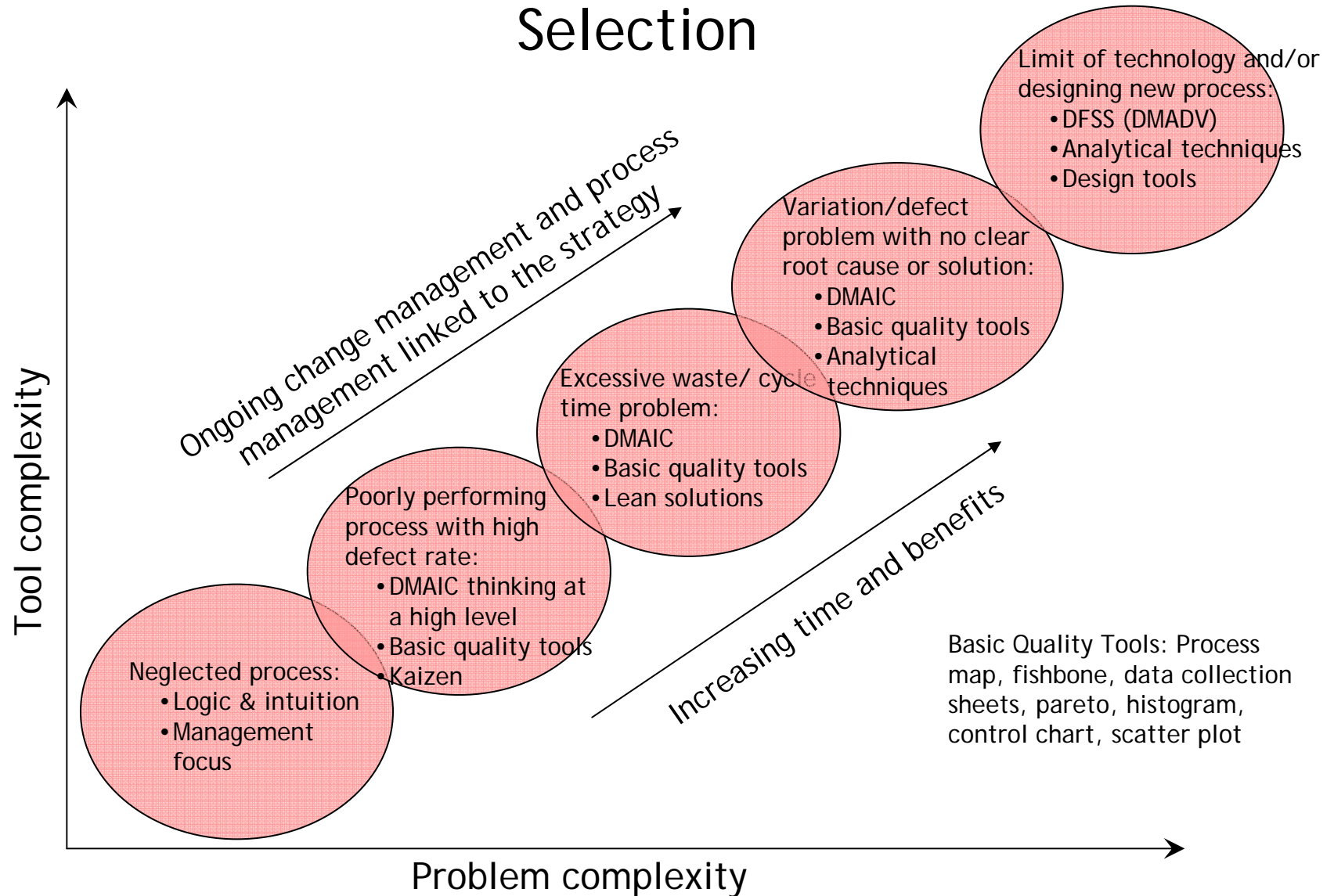
Lean

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