Moving Lean and Six Sigma from FAD to Core Operational Practice

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Today's Key Points
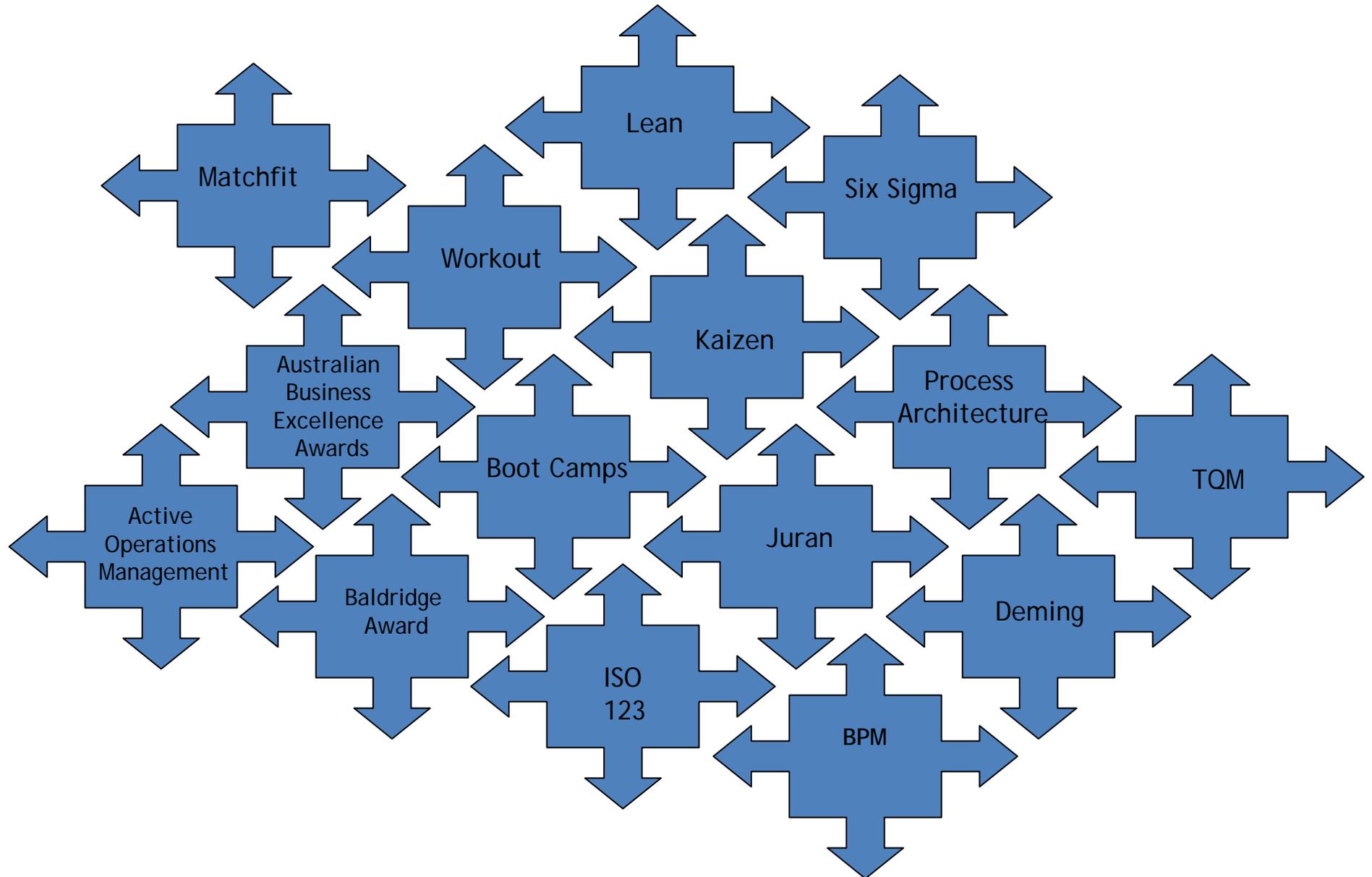
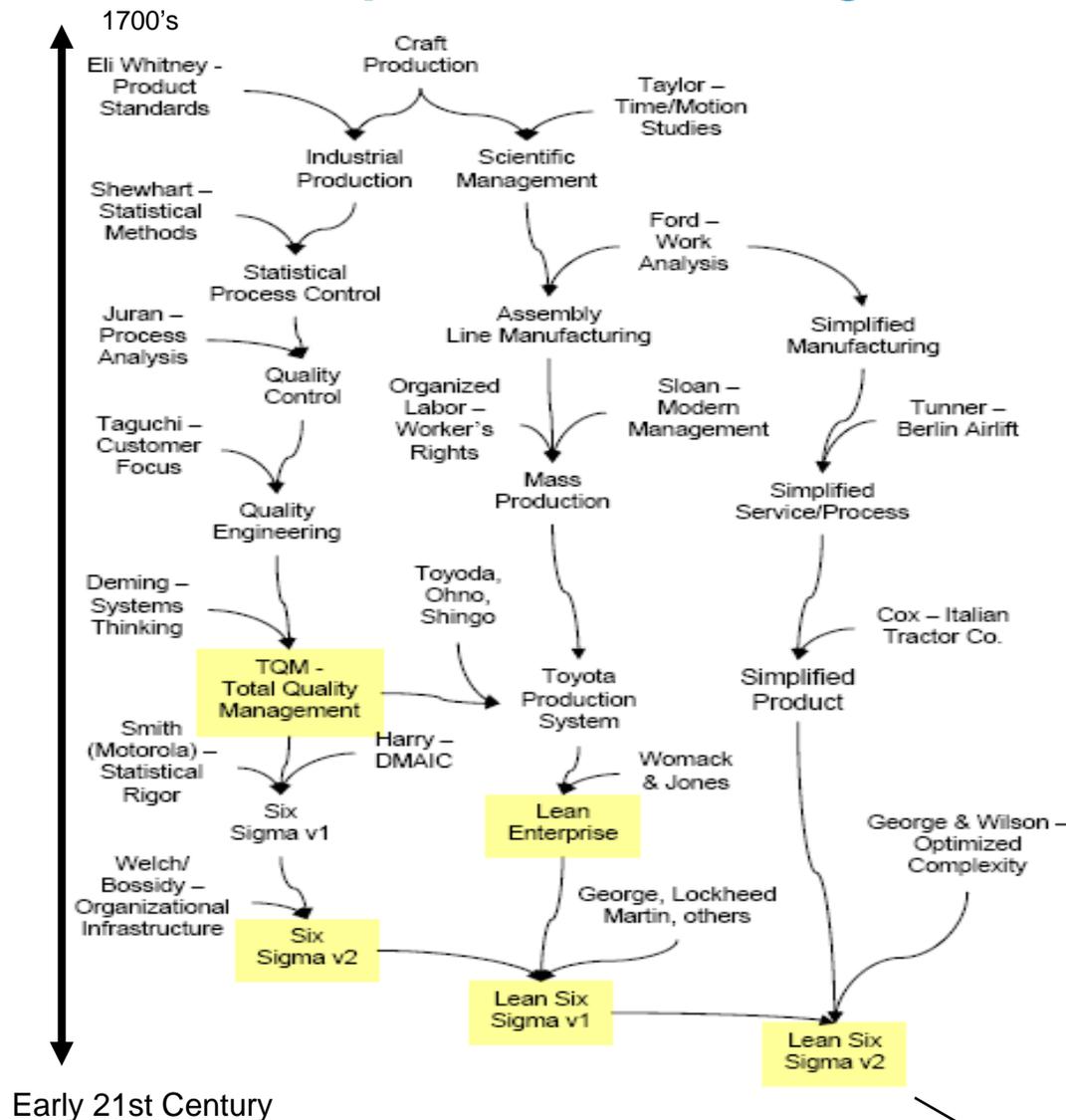- **Setting Context**

- **Today's Challenges**

- **A Way Forward**

Setting Context

You would have heard of many of these 'branded' Operations and Process Management 'products"

The science and economics of operations and process management is not new

1700's

Craft Production

Eli Whitney – Product Standards

Taylor – Time/Motion Studies

Industrial Production

Scientific Management

Shewhart – Statistical Methods

Ford – Work Analysis

Statistical Process Control

Juran – Process Analysis

Quality Control

Assembly Line Manufacturing

Simplified Manufacturing

Taguchi – Customer Focus

Organized Labor – Worker's Rights

Sloan – Modern Management

Tunner – Berlin Airlift

Quality Engineering

Mass Production

Simplified Service/Process

Deming – Systems Thinking

Toyoda, Ohno, Shingo

Cox – Italian Tractor Co.

TQM - Total Quality Management

Toyota Production System

Simplified Product

Smith (Motorola) – Statistical Rigor

Harry – DMAIC

Womack & Jones

Six Sigma v1

Lean Enterprise

George & Wilson – Optimized Complexity

Welch/ Bossidy – Organizational Infrastructure

Six Sigma v2

George, Lockheed Martin, others

Lean Six Sigma v1

Lean Six Sigma v2

Early 21st Century

Quo Vadis

Six Sigma and Lean
- A subset of Quality
- Quality a subset of Operations Management
  - Fundamentals of Ops and Process management
  - Operations Strategy
  - Operations Design
    - People
    - Process
    - Equipment
    - Systems
  - Supply Chain Management
  - Resource and Capacity Planning
  - Improvement
  - Project management
  - Risk and Quality Assurance

Fundamentally they are the same

Philosophy:

All work is a process

They must be owned and measured

- A firm belief that all work can
be improved by understanding how it is performed

Principles:
- Focus on the customer
- Understand and manage variation
- Use facts and data, not jumping to solutions

Philosophy, principles and tools apply equally well for all types of operations:

- Sales and Marketing Operation
- Operations, Maintenance and Distribution Operations
- Design and Projects Operation
- Support Operation
- Information Technology Operation
- Management Operation

Anyone including the Managing Director run or are part of an operation

Today you will generally here of three types of improvement
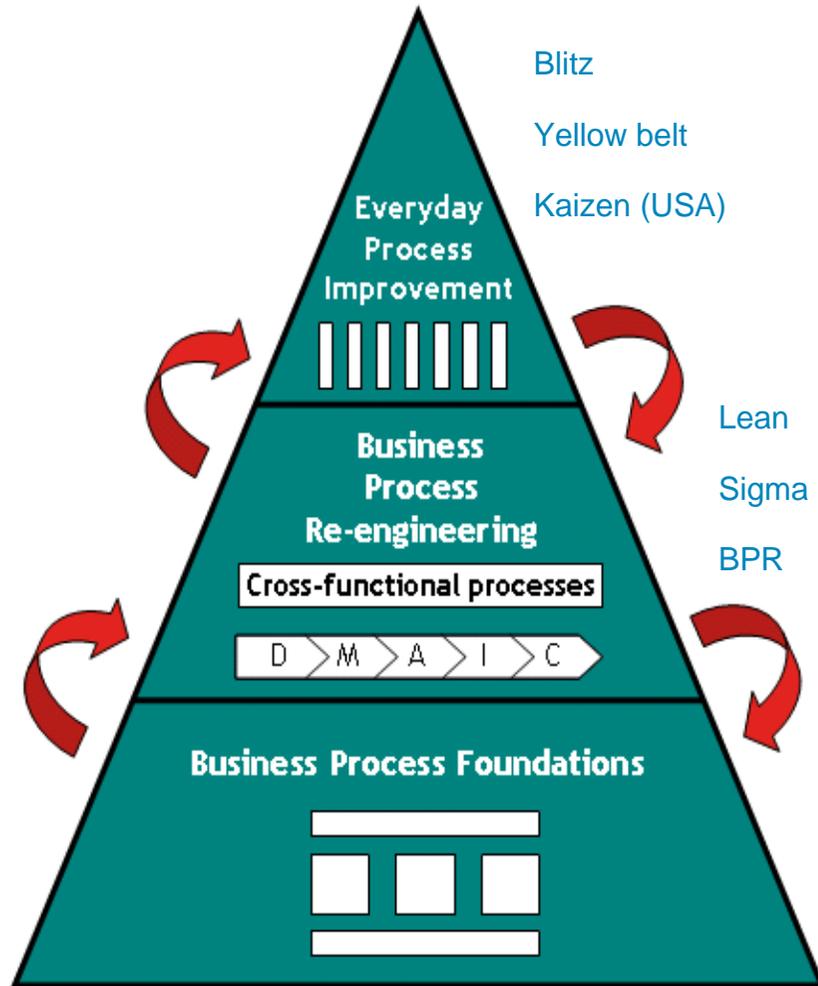
Everyday Process Improvement
> Short time frame, relatively simple changes focused within an immediate team

Business Process Re-engineering
> Focuses on end-to-end processes across multiple teams to drive more complex process changes, including automation & offshoring

Business Process Foundations
> Facilitates the end-to-end management and improvement of our business processes and ensures changes are sustained

All three approaches are important to achieve our desired outcomes

KPI / Continuous Improvement Approach	Increase Customer Satisfaction	Increase Employee Engagement (EOS)	Direct $ benefits	Sustainability
Everyday Improvement	LOW to medium	HIGH	LOW to medium	LOW
Re-engineering	HIGH	MEDIUM	HIGH	LOW
Business Process Management	MEDIUM to high	LOW	MEDIUM to high	HIGH

Example of one companies quality approach
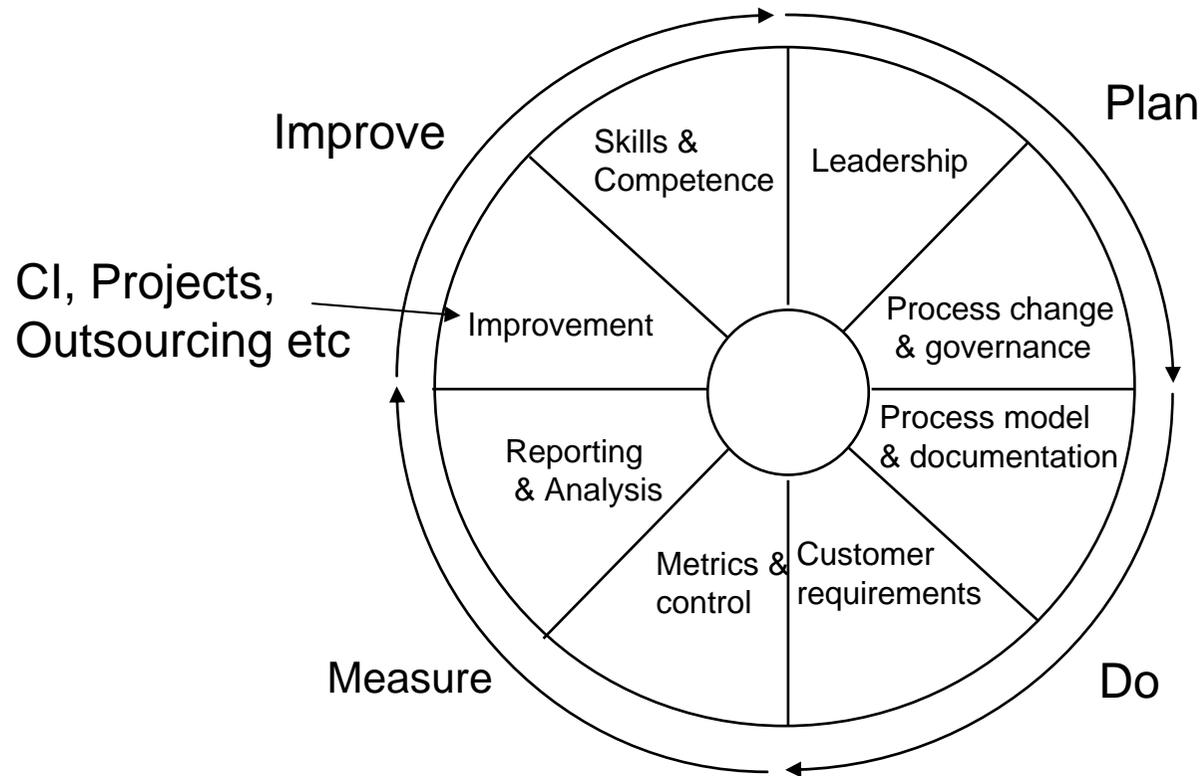
Role of at true "Quality" or "CI" manager is to coordinate all this!
Does not do it all but manages the journey
ISO itself is built in to this and is not separate
Requires a broader skill set role is usually often part of a efficiency portfolio

Journey to operational and process excellence

One Way ▶ Same Way ▶ Better Way

Focus of ISO

Focus on Lean Sigma
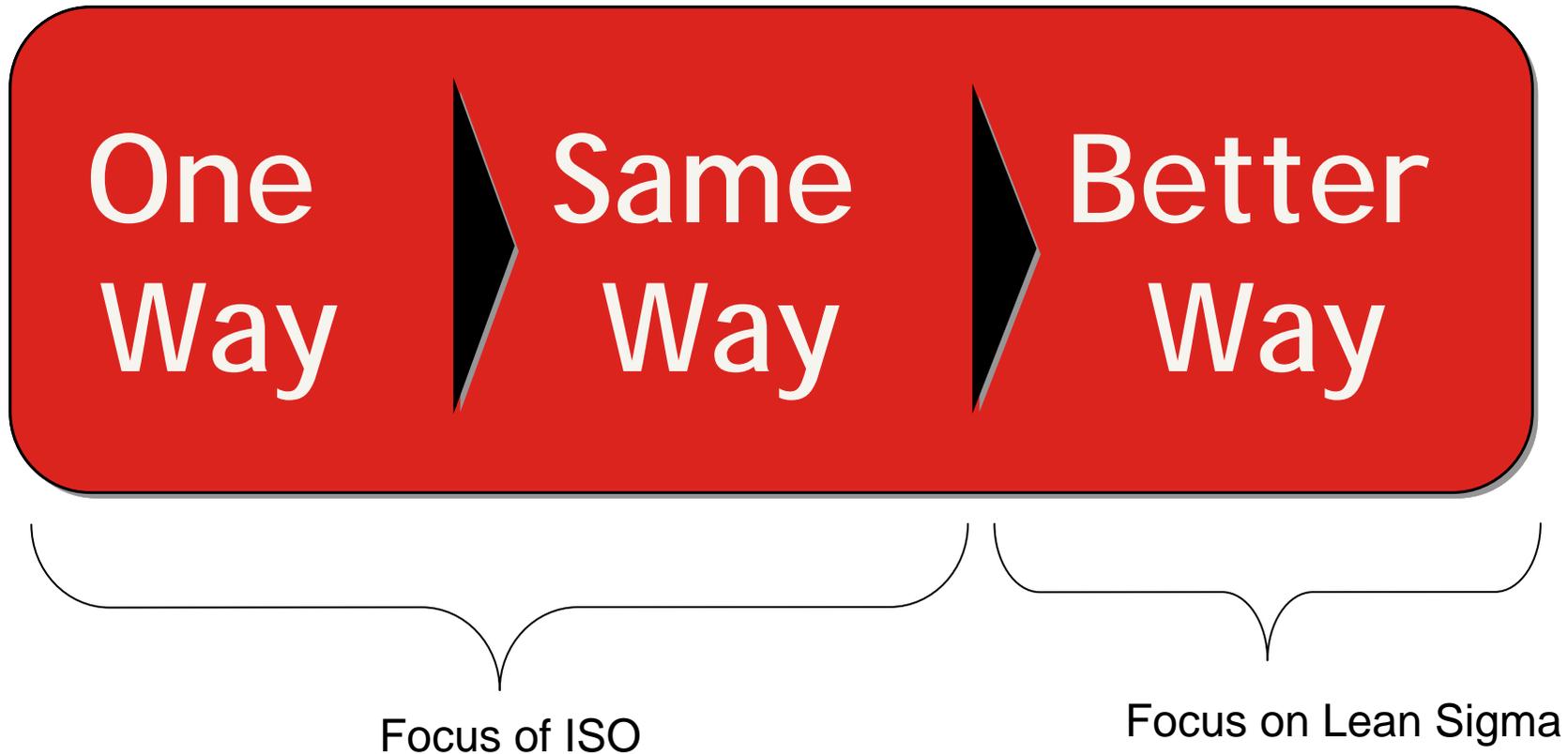
Challenges that face us

Not ending up here?

ISO

ISO should be the chock but too often it's also a barrier

Continuous
Improvement

Strategic (step change)
improvement

Strategic
(step change)
improvement

Continuous
Improvement

Improve
Plan
Skills &
Competence
Leadership
CI
Improvement
Process change
& governance
Reporting
& Analysis
Process model
& documentation
Metrics &
control
Customer
requirements
Measure
Do

ISO

ISO
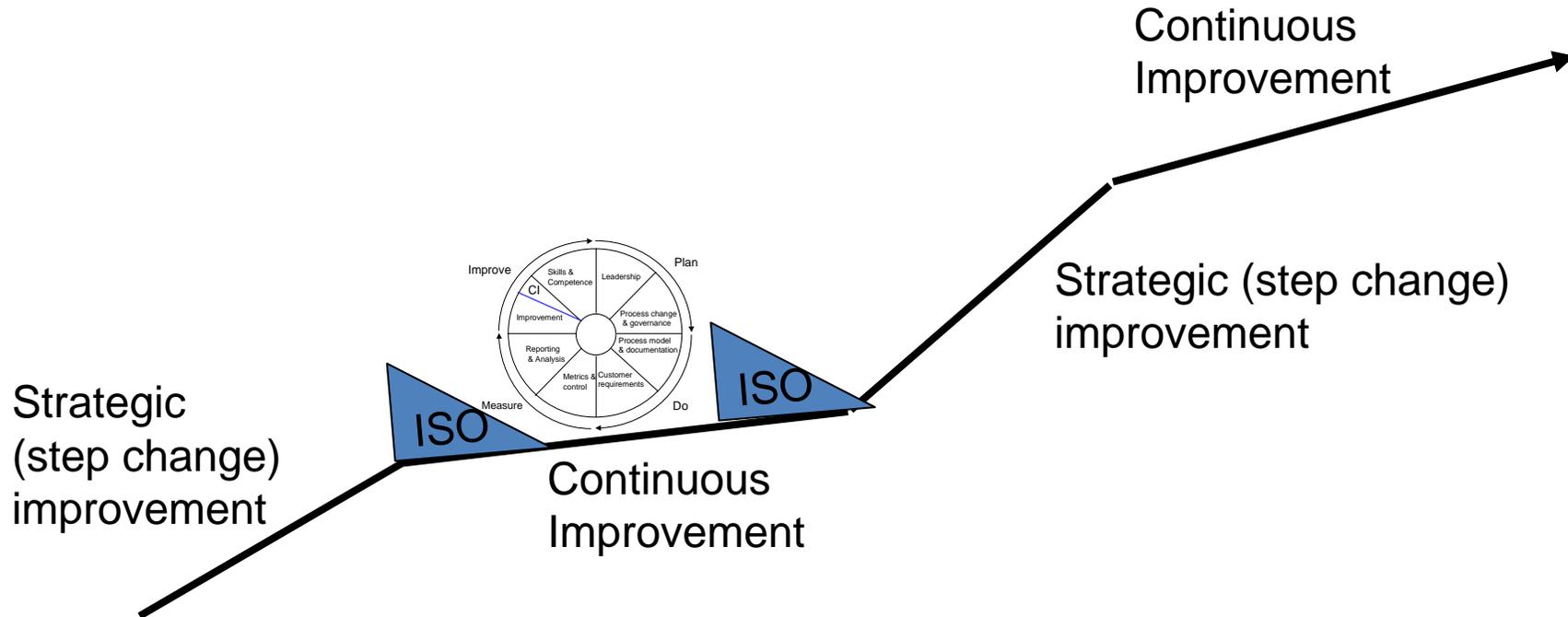
Quality Deployments have all been succesful… for a relatively short time (< one generation)

A real search for identity! Yet part of the Quality Family

ISO

Six Sigma

Lean

Yet business people just keep trucking along, and have
Not fully accepted quality into the day to day of business

Despite the successes

Example 1

41 % increase in productivity in two years (volumes ↑ 36%, FTE ↓ 4%)

Industry leading customer satisfaction rating (From 6.9 to 7.5)

Costs down 19% ($222 to $181 per member ↓ 19%)

Service Level ↑ 17% (timeliness)

Example 2

EOS from 38% to 61% over 3 yrs

Productivity: ↑ 24% in 2 years

Non-Lending losses ↓ 91%

Example 3

45% productivity improvement

EOS ↑ 19% in 3 yrs (now 67%)

Non-Lending losses down 90%

Example 4

14% p.a. productivity improvement (49% ↑ in 3 years)

EOS from a low of 34% to 52% since 2005

International Payments unit costs ↓ 36% ($4.66 to 2.97 in 3 yrs)

Service on time 99.996%

Accuracy 99.981%

Observations and Broad Findings

- Many incredible successes of both Lean and Six Sigma

- More hard nosed studies suggest:
  - Lean and Sigma have mainly replaced rather than added to the concepts of JIT and TQM*
  - They are essentially repackaged versions of the former and tend to follow fad (product) life cycle
  - Means a new fad will come soon

- Businesses are sceptical (especially in Oz)

* Lean, six sigma and lean sigma: fads or real process improvement methods?
Dag Naslad BPM Journal 2008

More challenges that face us

- **Branding…..Gimmicky**

- **Qualifications…Loose and too myopic**

  ….5 years to be an MBB?

  - a chartered accountant in five years
  - An actuary in five years
  - A doctor
  - A senior engineer?

- **Lack of attention at MBA level**

  - Quality and Operations Management is usually only one subject and often and elective
  - Not seen as important for the upcoming senior executives toolset

  We need to broaden the skill sets of Lean Six

Challenges that faces us

1. The rise and rise of "Leadership" or "Backslapping" training to detriment of Quality and Operations training (seen as inferior)

2. A critical initial ingredient but sometimes lacks further substance

A way forward

5 critical ingredients

1. Leadership

"So, if it's good it's Mister Coffee... and if it's bad, it's me?"

Fundamental Attribution Error:
Deming summed this up blaming the person not the system

A renewed approach to leadership

2. Motivating the Team

LEADERSHIP

3. Changing the environment

1. Self Awareness

These are critical, provide a will but not necessarily a way.

The most important element …achieved through excellence in Operations Management
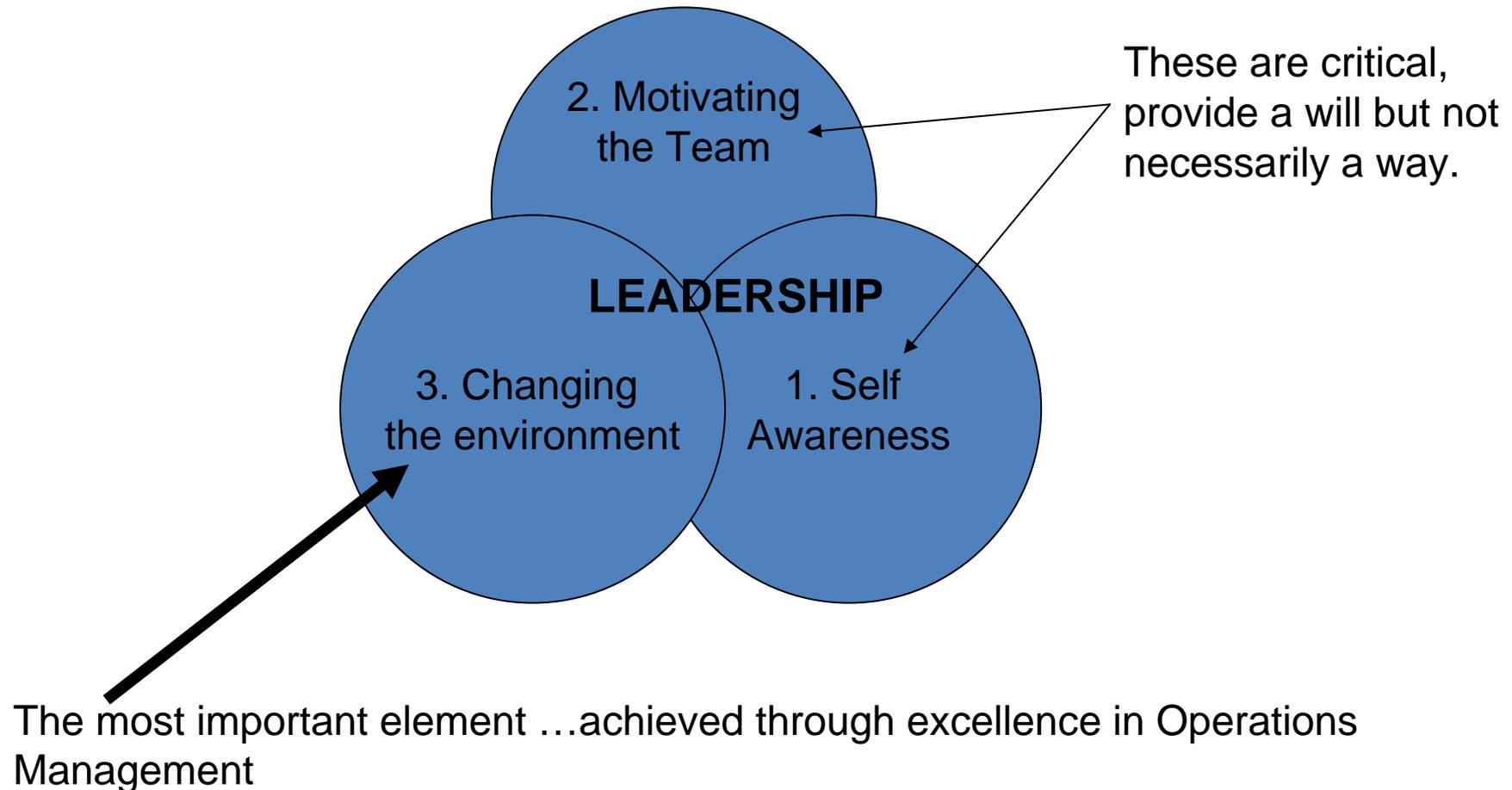
A partnership with HR

Must cross the bridge and work together not compete

2. Quick Wins…*seeing is believing*

Facts & Experience

Spelling

Arithmetic

Organising

Scheduling

Accounting

Project

Engineering

Building

"Finance"

Commerce Grads
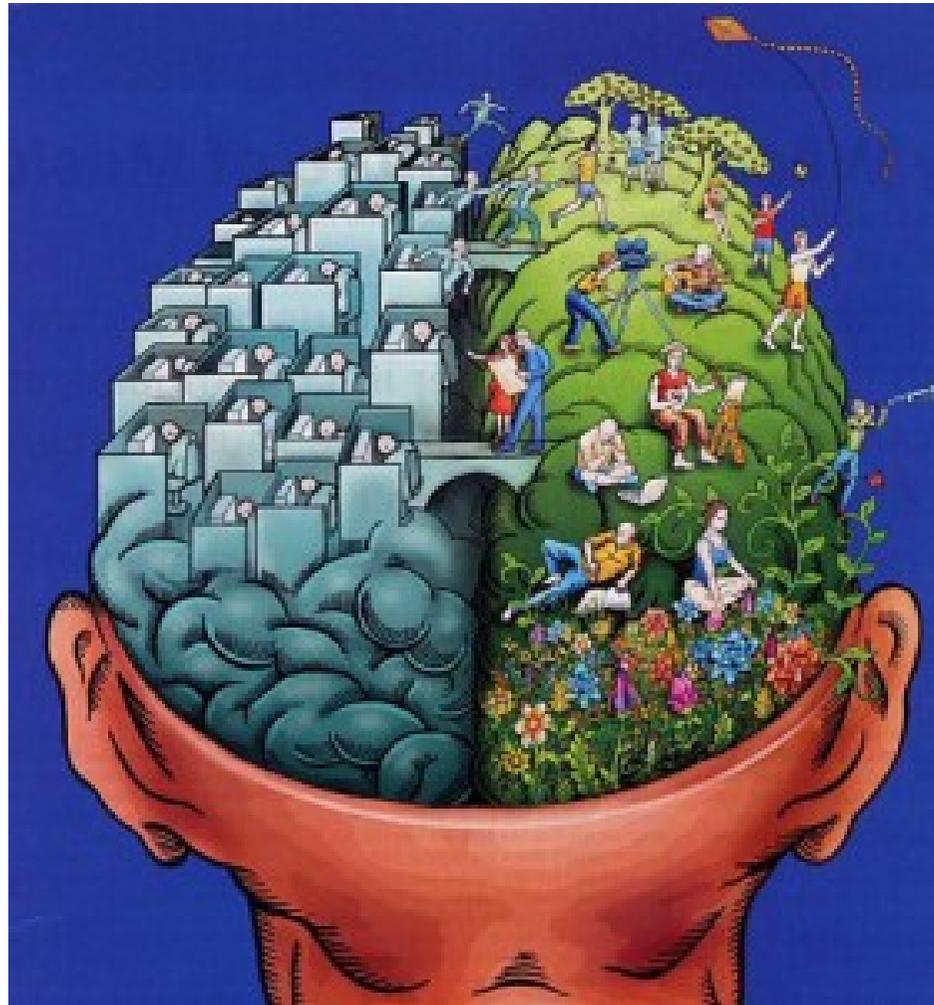
Intuition & Concepts

Art

Music

Design

Mathematics

Advanced Physics

Most Engineering

Architecture

Musicians

Artists,

Advertisers

Arts/Science/Eng Grads

3. Holistic capability and training

🔹 Operations Management

– Operations strategy

  – Determining what your operation should do

– Operational structure

– Developing correct operational Measurements

– Managing your resources

– Assessing the operations performance

– Sustaining and improving performance

Helping people day to day, not just in project sense

Operations Management Course -

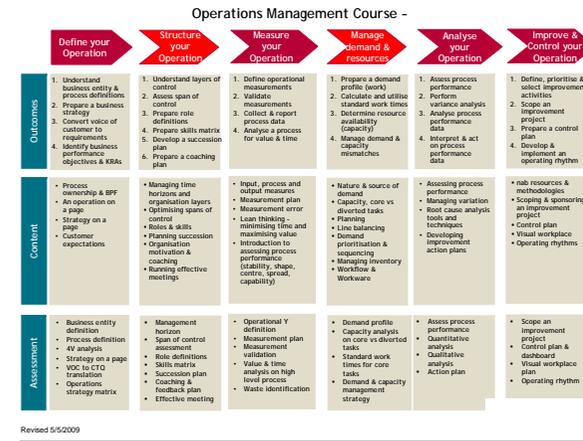|	Define your Operation	Structure your Operation	Measure your Operation	Manage demand & resources	Analyse your Operation	Improve & Control your Operation
Outcomes	1. Understand business entity & process definitions 2. Prepare a business strategy 3. Convert voice of customer to requirements 4. Identify business performance objectives & KRAs	1. Understand layers of control 2. Assess span of control 3. Prepare role definitions 4. Prepare skills matrix 5. Develop a succession plan 6. Prepare a coaching plan	1. Define operational measurements 2. Validate measurements 3. Collect & report process data 4. Analyse a process for value & time	1. Prepare a demand profile (work) 2. Calculate and utilise standard work times 3. Determine resource availability (capacity) 4. Manage demand & capacity mismatches	1. Assess process performance 2. Perform variance analysis 3. Analyse process performance data 4. Interpret & act on process performance data	1. Define, prioritise & select improvement activities 2. Scope an improvement project 3. Prepare a control plan 4. Develop & implement an operating rhythm
Content	• Process ownership & BPF • An operation on a page • Strategy on a page • Customer expectations	• Managing time horizons and organisation layers • Optimising spans of control • Roles & skills • Planning succession • Organisation motivation & coaching • Running effective meetings	• Input, process and output measures • Measurement plan • Measurement error • Lean thinking - minimising time and maximising value • Introduction to assessing process performance (stability, shape, centre, spread, capability)	• Nature & source of demand • Capacity, core vs diverted tasks • Planning • Line balancing • Demand prioritisation & sequencing • Managing inventory • Workflow & Workware	• Assessing process performance • Managing variation • Root cause analysis tools and techniques • Developing improvement action plans	• nab resources & methodologies • Scoping & sponsoring an improvement project • Control plan • Visual workplace • Operating rhythms
Assessment	• Business entity definition • Process definition • 4V analysis • Strategy on a page • VOC to CTQ translation • Operations strategy matrix	• Management horizon • Span of control assessment • Role definitions • Skills matrix • Succession plan • Coaching & feedback plan • Effective meeting	• Operational Y definition • Measurement plan • Measurement validation • Value & time analysis on high level process • Waste identification	• Demand profile • Capacity analysis on core vs diverted tasks • Standard work times for core tasks • Demand & capacity management strategy	• Assess process performance • Quantitative analysis • Qualitative analysis • Action plan	• Scope an improvement project • Control plan & dashboard • Visual workplace plan • Operating rhythm

Revised 5/5/2009

4. Build a Community of Practice

- Forums
- Newsletters
- Snr guest speakers

5. Tools and Methods

Build a common tool box and deploy group wide

- **Necessary but time consuming**

- **Difficult to justify value until pull grows**

Unfortunately has to

be done on the run

Are we up to the challenge

- No Gimmicks

- No Lean sigma wars

- No sigma arrogance

- Work with HR

- Build and broaden our own expertise

Questions?