The Power of Six Sigma in Procurement

ISM Services Conference

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December 3, 2010

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Discussion Points

- A Humana Inc. Overview
- Fueling Innovation and Growth
- Six Sigma at Humana…

  and within Procurement
- Lessons Learned

Our Dream

Help People Achieve Life-long Well-being.

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Humana's Well-Being Approach

The Full Spectrum of Well-Being

Living happily with a balanced sense of purpose, belonging, security & health

Purpose

Service
Vocational
Advocacy

Health

Physical
Emotional
Spiritual

Belonging

Social
Community
Family

Security

Financial
Personal Safety
Family
Environmental

Transformation

Revenue | $31B

Nursing Homes

In 1961, two young lawyers from Kentucky, David A. Jones and Wendell Cherry, had started a nursing home business.

Jones and Cherry plus 4 other partners created Heritage House and Extendicare. By 1968, the company owned 7 nursing homes.
Exited business in 1972.

Hospitals

During the early 1980's Humana had become the largest hospital company in the world — owning over 80 hospitals around the globe.

Hospitals were “spun off” into a separate entity in 1993.

Health plans

Humana expanded into the health insurance industry in 1984, offering affordable HMO plans. Humana currently offers a range of health plans for the needs of individuals, families, and businesses. Located in Kentucky with headquarters in Louisville.

1961 1968 1974 1984 2010

External Factors

Manufacturing Economy	Knowledge Economy	Collaborative Economy
Goods	Information	Experience
Equipment	Human Capital	Social Capital
Efficiency	Effectiveness	Innovation
Productivity	Intelligence	Engagement

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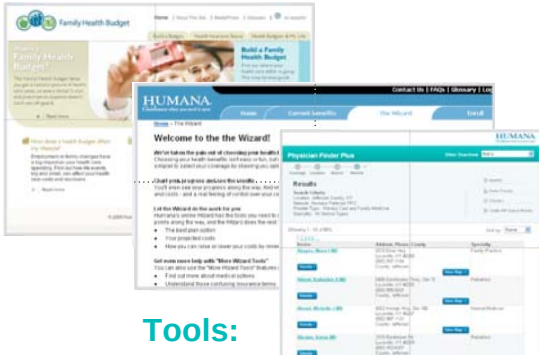
Fueling Innovation and Growth

Personal Nurse

SmartSummary

HumanaAccess Card

RightSource, prescription mail order delivery

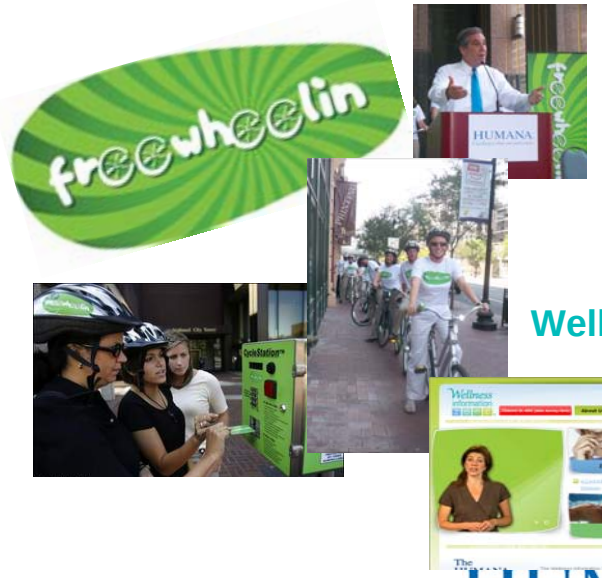


Tools:

Physician Finder
Family Health Budget
Enrollment Wizard

MyHumana

Humana Games4Health



WellZone.org

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Operating Commitments

- Commitment to associate value principle
- Perfect service and engagement
- Collective responsibility for prioritizing business initiatives
- Everything considered / everyone plays
- Sustainable long-term view
- A focus on talent

Collective Responsibility for Prioritizing Business Initiatives

Think "few." Concentrate on the essentials. Figure out what to ignore.

*Be **sharply-pointed** rather than well-rounded*

Align with the Strategy. Pursue the Strategy.

Grow** toward the **sun

Identify the "value drivers" in your organization

*Get your team engaged as **business people***

Everyone needs to be sufficiently informed

***Circulate. Link** people up. **Orchestrate** conversations.*

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Everything Considered / Everyone Plays

All leaders demonstrate appropriate use of Humana's resources and finances

*Behave like you're in **business for yourself***

Savings opportunities are everywhere

***Listen up**, leader. **Ask** your team*

Focus on adapting and thriving

*Model **adaptability***

At Humana Inc.

Six Sigma Process Improvement Methodology

Define

What's important to the customer?

- VOC Research
- Customer CTQs

What's the business Case?

- Process Understanding
- Scoping

What's in it for me?

- What's the Plan?
- Project Plan and Charter
- Team Communication Plan

Measure

How is performance measured?

- Define Data Type(s)
- Operational Definition(s)

Do you have good data?

- Potential X(s)
- Measurement System Analysis
- Determine Appropriate Sample
- Data Collection Plan

What is the baseline?

- Descriptive Statistics
- Capability Analysis
- Performance Goal

Analyze

What X(s) matter most to the goal?

- Descriptive Statistics Analysis

What is the impact on the Y?

- Inferential Statistics Analysis

Why are these X(s) happening?

- Descriptive Statistics
- Capability Analysis
- Performance Goal

Improve

Do these X(s) influence the Y?

- Demonstrated Relationship

What is the solution?

- Solution Screening
- Solution Refinement

Did the solution work?

- Statistical Pilot Results
- CBA

Control

How will we ensure

- Controls for Vital X(s)

What if something goes out of control?

- Control Plan
- Tracking for Y(s) and X(s)
- Transfer to Process Owner
- Project Validation Scheduled

VALIDATION:
What did we learn and next steps?

- Final Documentation and Signoff
- Lessons Learned
- Follow-Up Projects
- Team Celebration

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Practical Review of Six Sigma: 6σ Basics

1. What is Six Sigma?

6σ Basics

DMAIC Requirements

Project/Student requirements

Practical Meaning of "99% Good"

- 20,000 lost articles of mail per hour
- Unsafe drinking water almost 15 minutes out of each day
- 2 short or long landings at most major airports each day
- No electricity for almost 7 hours each month

3σ Capability	93.32%	Historical Standard
4σ Capability	99.38%	Current Standard
6σ Capability	99.99966%	New Standard

σ	PPM
2	308,537
3	66,807
4	6,210
5	233
6	3.4

Process Capability — *Defects per Million Opportunities*

(Distribution Shifted ± 1.5σ)

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Process Improvement Phases

1. What is Six Sigma?

6σ Basics

DMAIC Requirements

Project/Student requirements

DMAIC phases

Define – Clarify the problem to be solved, identify the key stakeholders and customers, develop a clear charter relevant to customer needs.

Measure – Document baseline performance of the process related to the problem, validate the measurement.

Analyze – Identify root causes (the "Xs") of the problem and quantifies their effect on process performance.

Improve -- Develop, select and test best solutions while minimizing the risk of change.

Control -- Ensure the solutions are 'permanently embedded' in the process with robust controls to ensure sustainability and consistency.

Sponsor reviews are conducted as part of the sign off for each phase.

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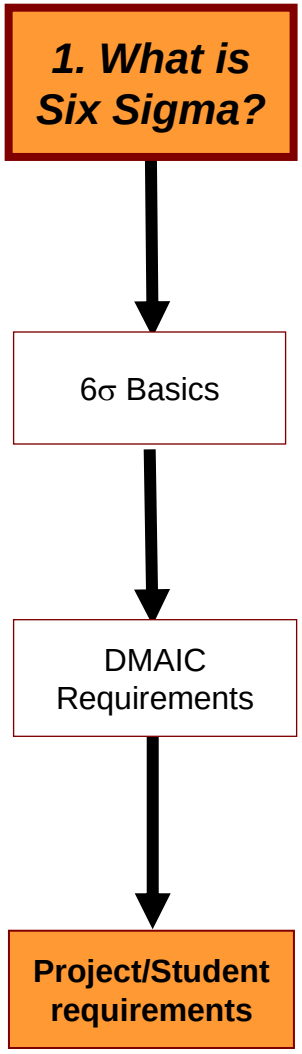
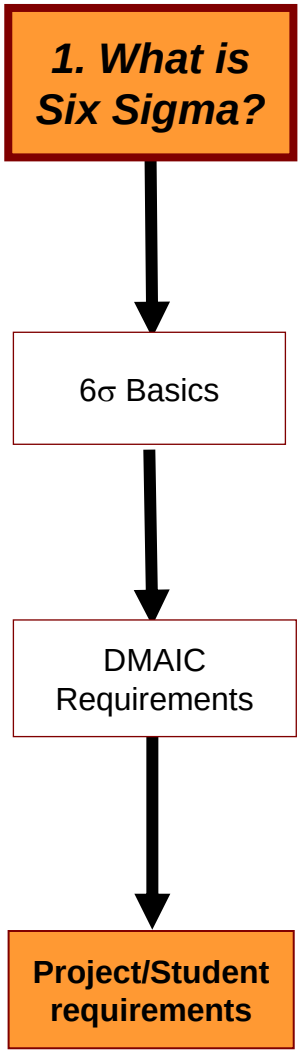
DMAIC Project Requirements



- **Strategic Alignment**
- **Return on Investment**
- **Problem is clear - Solution Unknown**
- **Project Scope and Training Cycle**
- **Geography** (complexity, location(s), areas impacted)
- **Support**
- **Data**

DMAIC Student Requirements



- **Process/Work Experience**
- **Process Analysis Role**
- **Time Commitment**
- **Sponsorship**
- **Passion**

S.M.A.R.T. Goals

S.M.A.R.T.

- Specific - The goal should be exact regarding what the team hopes to accomplish.
- Measurable - So the team knows exactly when the goal has been achieved.
- Achievable – The goal is something that can be achieved in the scope and timeframe of the project. The goal is neither too ambitious nor too trivial.
- Relevant – The issue is significant to the business.
- Time Bound - The time frame should be achievable yet limited enough to make the goal valuable to the company.

Effective Goal Statements

- Describe desired/planned new performance
- Are as objective as possible
- Are also brief and use common vs. tech. terms
- Do not include causes or imply solutions
- May include estimates or placeholders (x%)
- Are often reviewed after Measure & Analyze [example: Our deliveries must be within +/- I hour 98% of the time by year end]

Capturing Plans and Tracking Progress

The Charter

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Team Charter
Name of Team:
Date created/updated:
Developed by/Contact person:

Problem Statement: (The "As Is" Statement : One sentence explaining what problem or need the team is being formed to address. Remember to make the Problem and Goal statements SMART: Specific, Measurable, Attainable, Relevant, Time-bound)

Objective/Goal: (The "Desired State" Statement: One sentence explaining what the goal or objective is related to the Prob lem Statement above. State how success of the team will be measured. What will be the specific, measurable results? Remember to make the Problem and Goal statements SMART: Specific, Measurable, Attainable, Relevant, Tir

Background: (Briefly explain what led to the need for this project. Explain any history that would be applicable understanding the problem or need. State the problem or need with data in terms of customer service, financi and/or productivity. Include current compared to targeted performance and any costs associated with the prob from a Cost/Benefit Analysis, if one was prepared)

Business Area:

Business Strategy Supported by this Proje this effort relates to our vision, value propositi core beliefs, or strategies)

Scope: (Define the boundaries of the project. Where does this project start and end? What is specifically **not** i the scope of this project? To which customer segments/work locations does this project apply? Which produc impacted? Which systems are included? Understanding the scope helps prevent "scope creep")

Customers and CTQs: (List the Major Highest Priority Customers and CTQs that will be addressed by this pr the customer-defined requirement(s) that will be improved by this project.)

Interdependencies: (List functions or projects that are dependent upon or will be affected by the actions of th

Anticipated Benefits (Financial/Other): (Describe benefits from successfully completing this project, including business growth (revenue enhancement), cost savings, cost avoidance, productivity improvements, and customer satisfaction improvement)

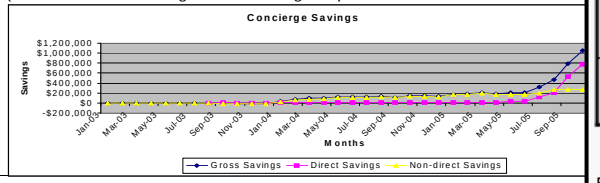
Team:

Role	***Name***
Sponsor/ Champion:	(person with ultimate ownership of project)
Leader:	(person with overall responsibility for the project including assuring results are achieved)
Team Members:	(people assigned to the team to contribute knowledge and expertise, participate at all meetings, and complete assignments as directed)
Project Manager:	(optional person assigned to support leader by managing project to stated timelines)
Facilitator:	(optional person assigned to mentor leader/team regarding processes and tools used by the team)
Customer:	(the recipient of the process output)

Time Line/Key Milestones:
(List key dates of the project. Examples: Start and stop date of the project, when the view of the system will be completed, when the current process analysis will be completed, when the solutions will be identified, when recommendations and a time-line will be presented to sponsors)

START DATE: ***COMPLETION:***

Performance Indicator: (Run or bar chart showing current and targeted performance - to measure results o



Manager/Supervisor: _____[insert typed name]_____ **Sponsor/Champion:** _____[insert typed name]_____

_____[signature]_____ _____[signature]_____

The Continuous Improvement Story

"Your Project Name" *(in the master view)*

Executive Summary

Project Team

- **Six Sigma Level:** [Green or Black Belt]
- **Business Area:** [insert business area]
- **Sponsor:** [insert sponsor name(s)]
- **Project Leader:** [Insert project leader name(s)]
- **Team Members:**
  - [Insert Team member names]
- **Project #:** [insert project number]
- **Six Sigma Coach:** [insert coach name]
- **Project Start:** [Define Start] **Project Closed:** [Control End]
- **Certifications:** [Insert any certifications accomplished]

The Opportunity

- **Project CTQ(s):** [insert the project CTQ including the definition of a defect]
- **Problem Statement:** [insert Problem Statement]
- **Goal Statement:** [insert Goal Statement]

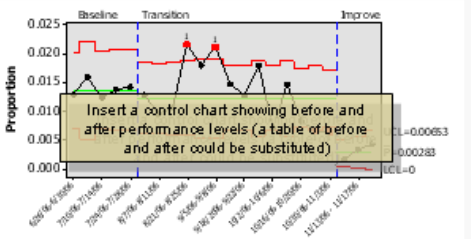
Analysis & Improvement

- **Baseline CTQ Perf:** [xx] % Defects , Z = [x.xx]

Root Causes Found	Improvements/Solutions
[Insert root causes] [Examples in cells below]	[Insert summary of improvement or solution for the root cause]
CMS Excluded Drugs	Changed process so screeners check for excluded drugs and route
Organizational Design & Division of Work	All areas now do both G & As, no internal re-routes allowed, just work case.
Training	Not consistent training, conducted training on process and new processes.

Validated Results

- **Improved CTQ Performance:** [xx] % Defects, Z = [x.xx]
  [xx] % improvement in defects



Business Benefits:
- [insert summary of hard and soft benefits]

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Quality Engineering: Enterprise Support

Quality practices that work!

Services ⇨ Skills ⇨ Results

Our Services

Since 2003, Quality Engineering has been effectively showing Humana associates how to improve processes using industry-leading methodologies.

- Six Sigma reduces defects or improves design.
- Lean eliminates "waste" or non-value added process steps.
- PMCS establishes process measures and controls.
- Process Prediction predicts key processes using experimentation & data.
- Consulting helps you explore, define and achieve strategic opportunities.
- Lunch and Learn sessions focus on quality tools.
- Yellow Belt sessions provide an introduction to Six Sigma tools and concepts.
- Certification Opportunities for Six Sigma and Lean

Our services are provided by experienced quality professionals dedicated to data-driven process improvement.

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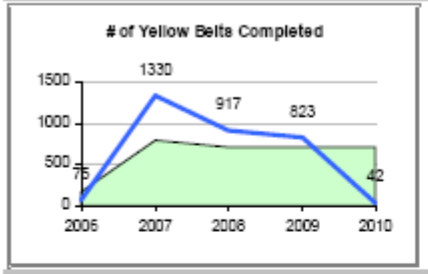
Quality Engineering: Scorecard

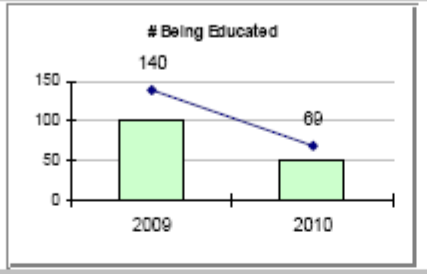
Quality Engineering Report Monday, March 29, 2010

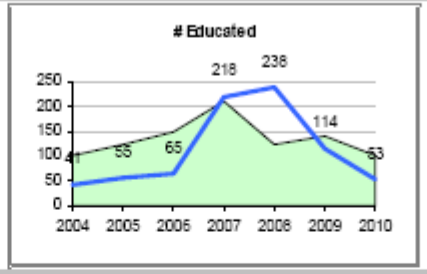
Year	Initiative Goal	# Nominated	Estimated Value	% Approved	Avg Estimated Value	# Trainees	# Certified Leaders
2010	92	39	$11,490,363	100%	$294,625	70	47

Goal Actual

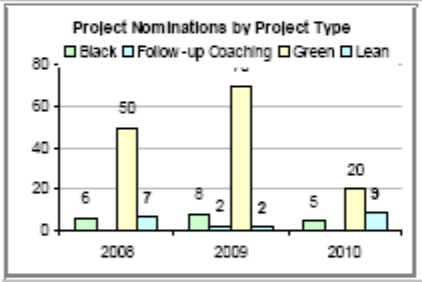
Building Relationships and Culture

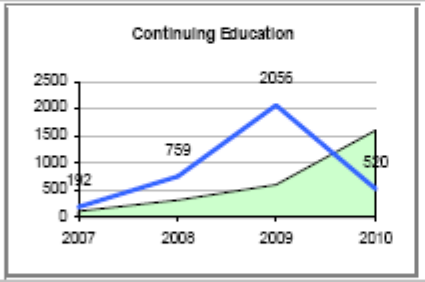


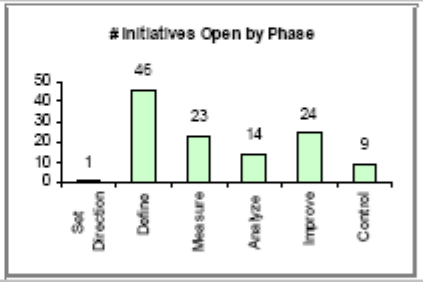


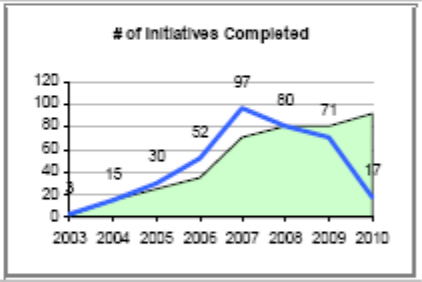


Continuous Improvement Initiatives

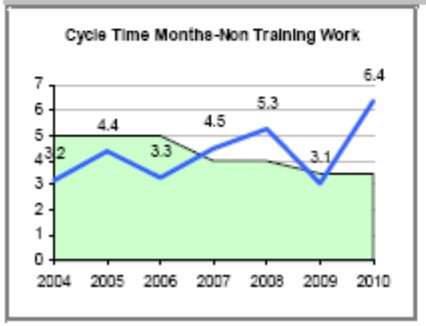


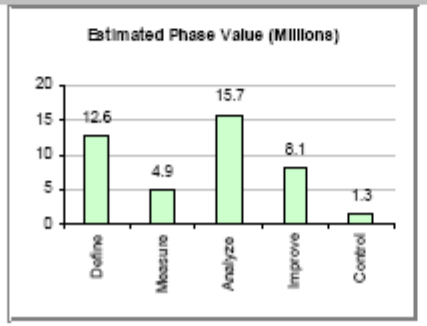


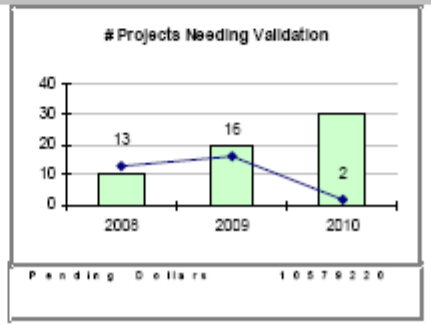


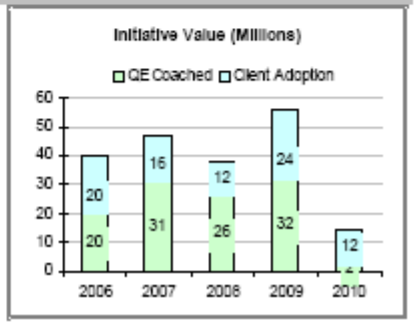


Business Value









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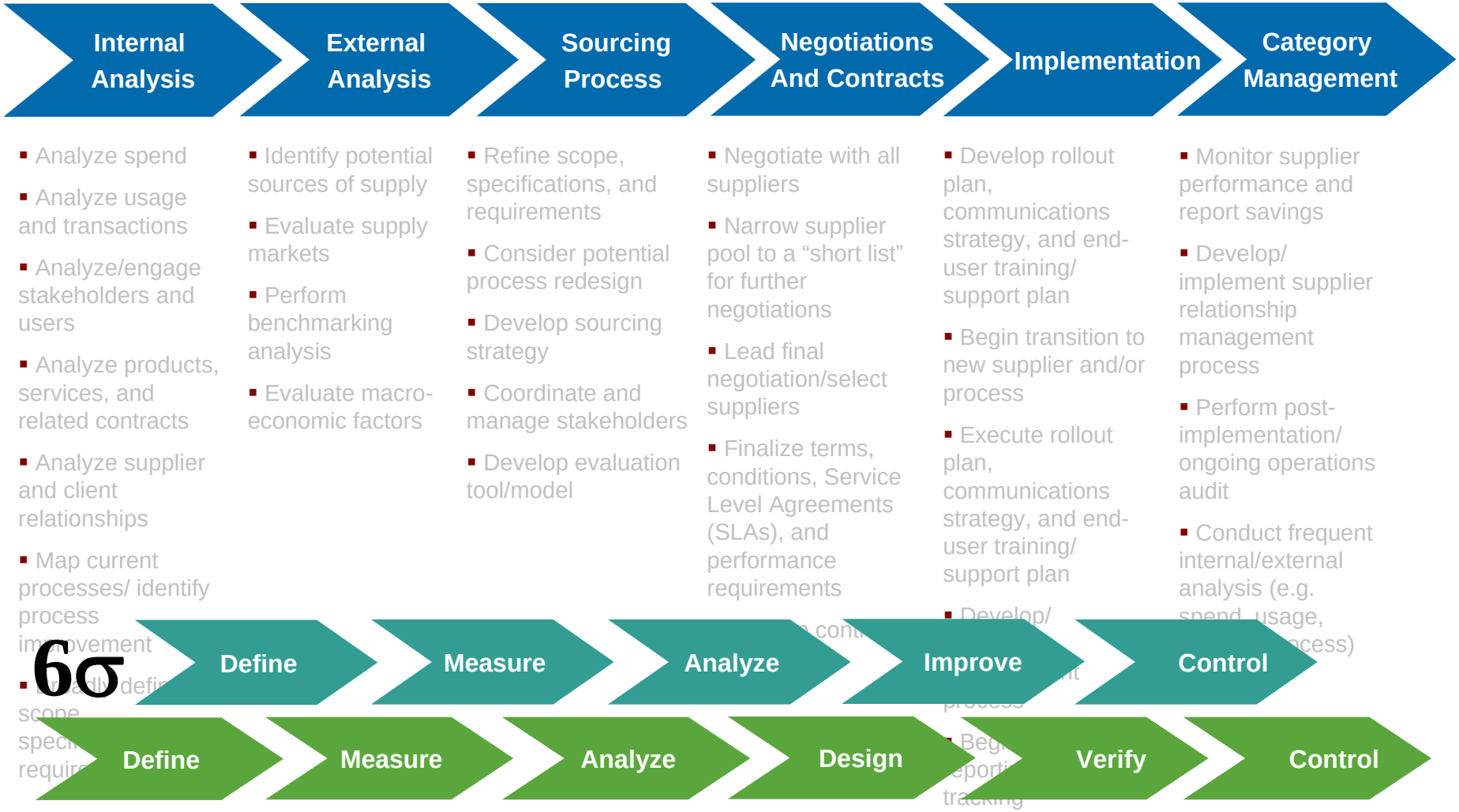
Within Procurement

Humana's Six-Step Procurement Process



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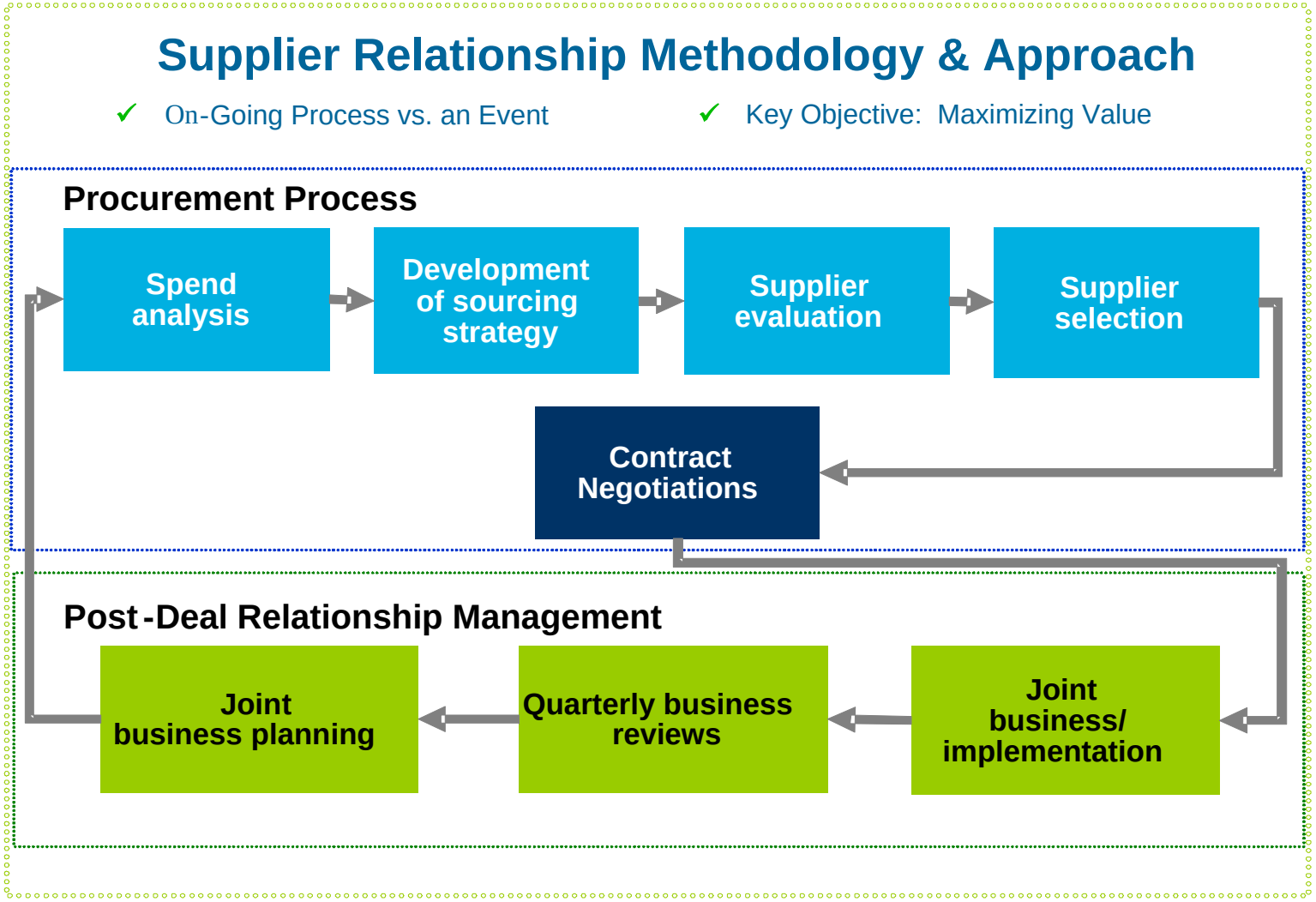
When is the “right time” for Six Sigma?



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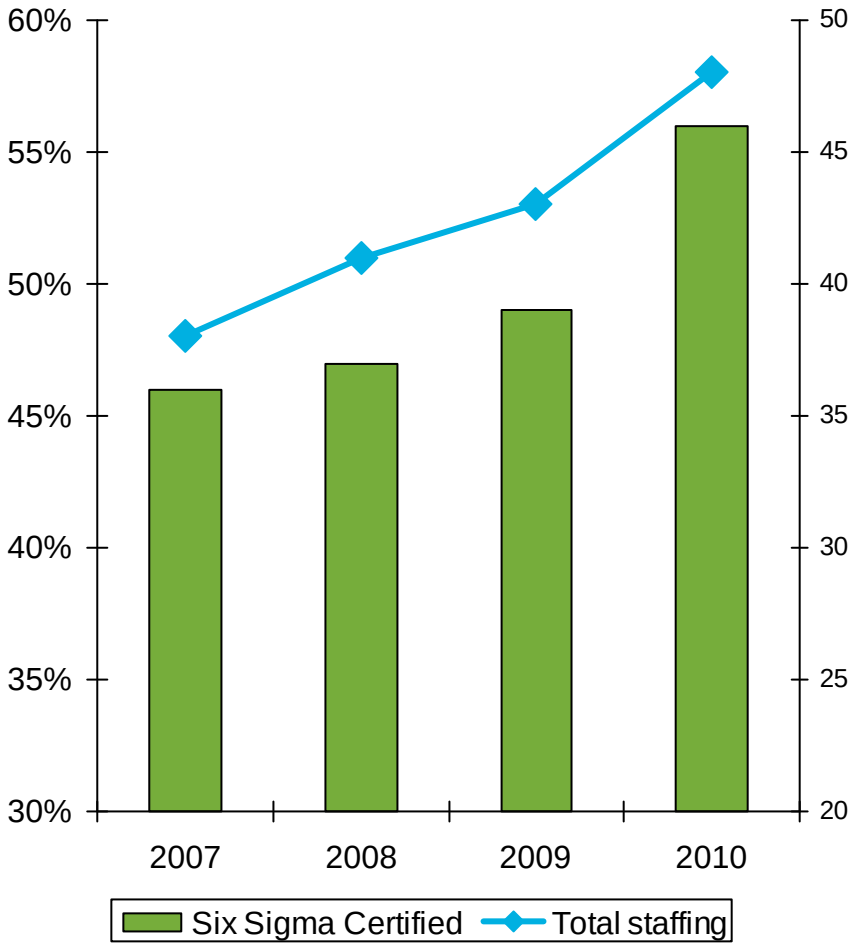
Six Sigma Trending within Procurement

Projects ($, 🕒) :

- External Recruiting Engagement
- Workspace Build-Outs: Furniture Purchase Management
- Medical Record Retrieval Management
- Postage Utilization
- Return Mail Management
- Approved Supplier Process Management
- Check Request Process Improvement
- Requisition to Purchase Order Release Cycle Time (UK)
- Promotional Goods Management
- Requisition Entry Accuracy
- Check Request Management
- Fleet Management
- Approved Supplier Management
- iProcurement Utilization
- Outside Services Spend Management
- M&A Integration
- Purchase Order Utilization
- Non Catalog Order Reduction
- Purchase Order Transmission
- e-Enabled Purchases
- Contingent Labor Management

Certification: Trend Overtime within Procurement



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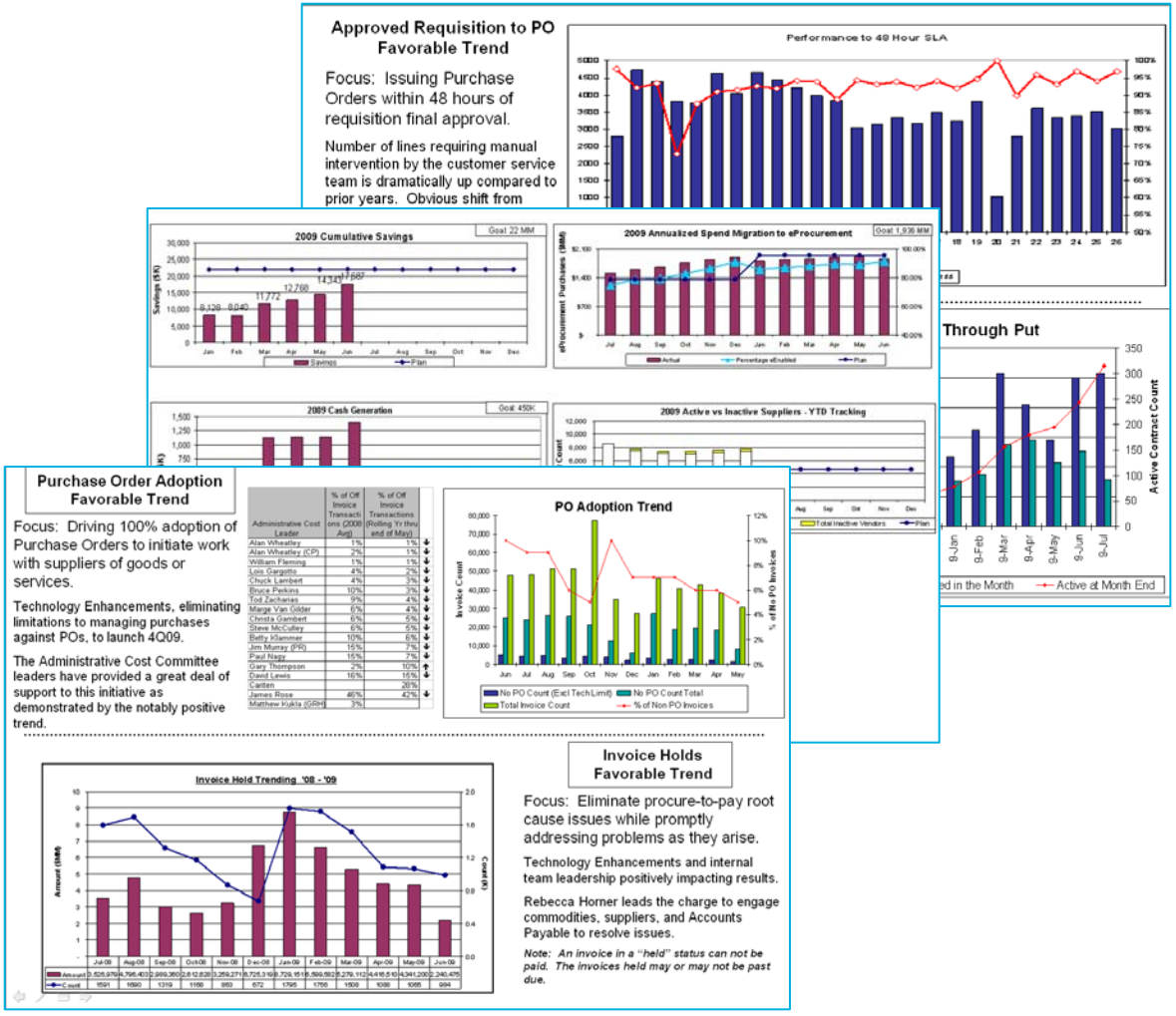
Measures of Success: Process and Results

Process Measures:

- Requisiton to Purchase Order (PO) Cycle Time
- Contract Cycle Time
- Government Purchasing Need-by-Date Compliance
- Competitive Awards
- PO Adoption
- PO Date to Invoice Date Compliance
- Supplier Self-Sufficiency
- Electronic Payments
- Approved Supplier Adoption



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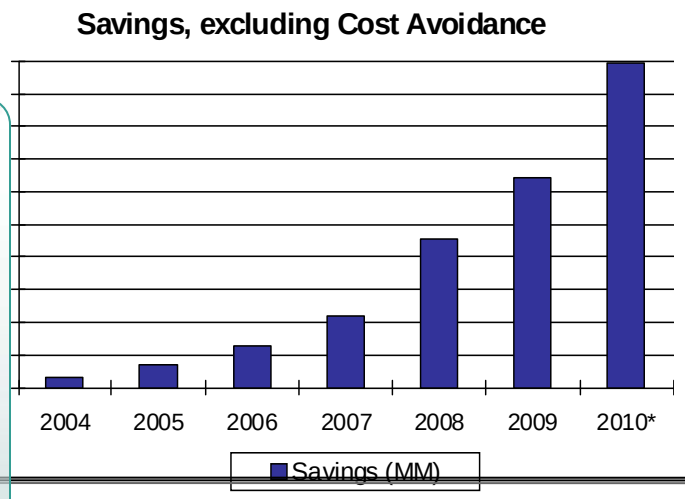
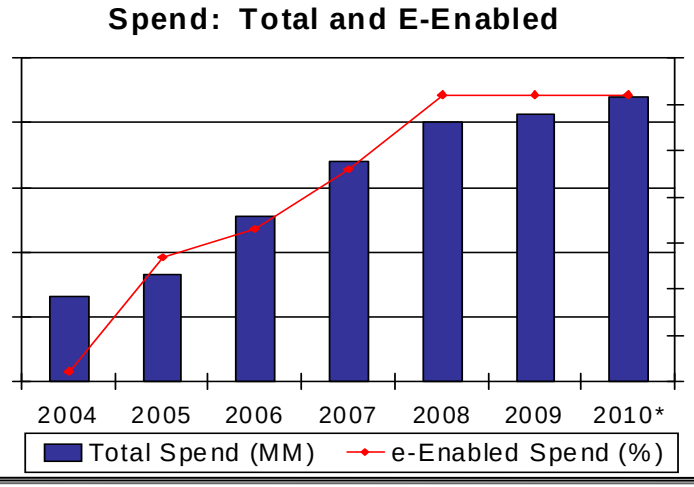
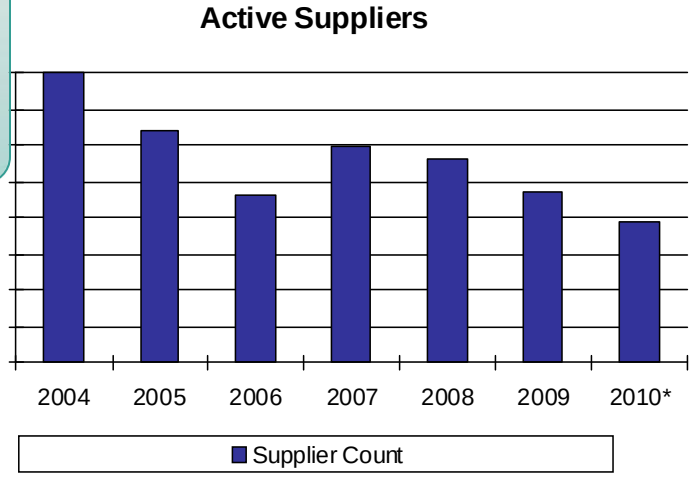
Measures of Success: Process and Results

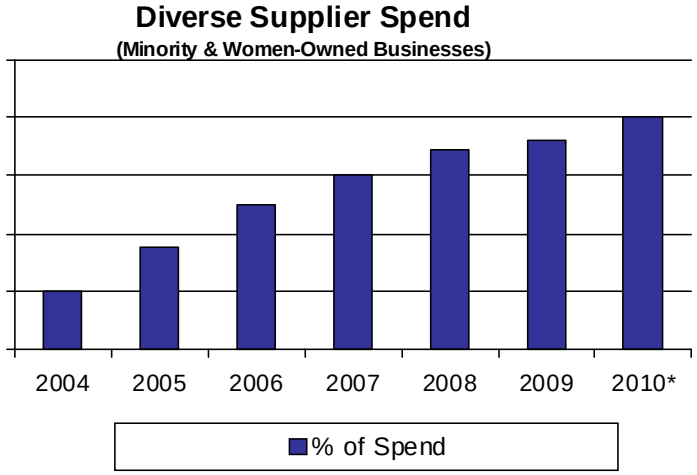
Results Measures:

- Productivity
- Diversity Spend
- Supplier Rationalization
- eProcurement Adoption
- Cash Generation









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Need for Lean: Focusing Internal-to-Procurement

Internally Focused "Lean" Six Sigma Opportunity: Creating a measurement system to enable us to drive continuous improvement ("do the right things well")

Current state: Today, we are unable to accurately track the cycle time through the procurement process absent adequate time stamps, variance in the definition of an "initiative" (or matter), and the resulting inconsistency of information reported

It is important to solve these problems because we wish to:

(1) Deliver quality procurement
(2) Effectively/accurately communicate process
(3) Manage business partner expectations
(4) Collaborating to maximize value
(5) Minimize NVA effort
(6) Effectively/efficiently complete VE and VA tasks
(7) Monitor and address variation over time

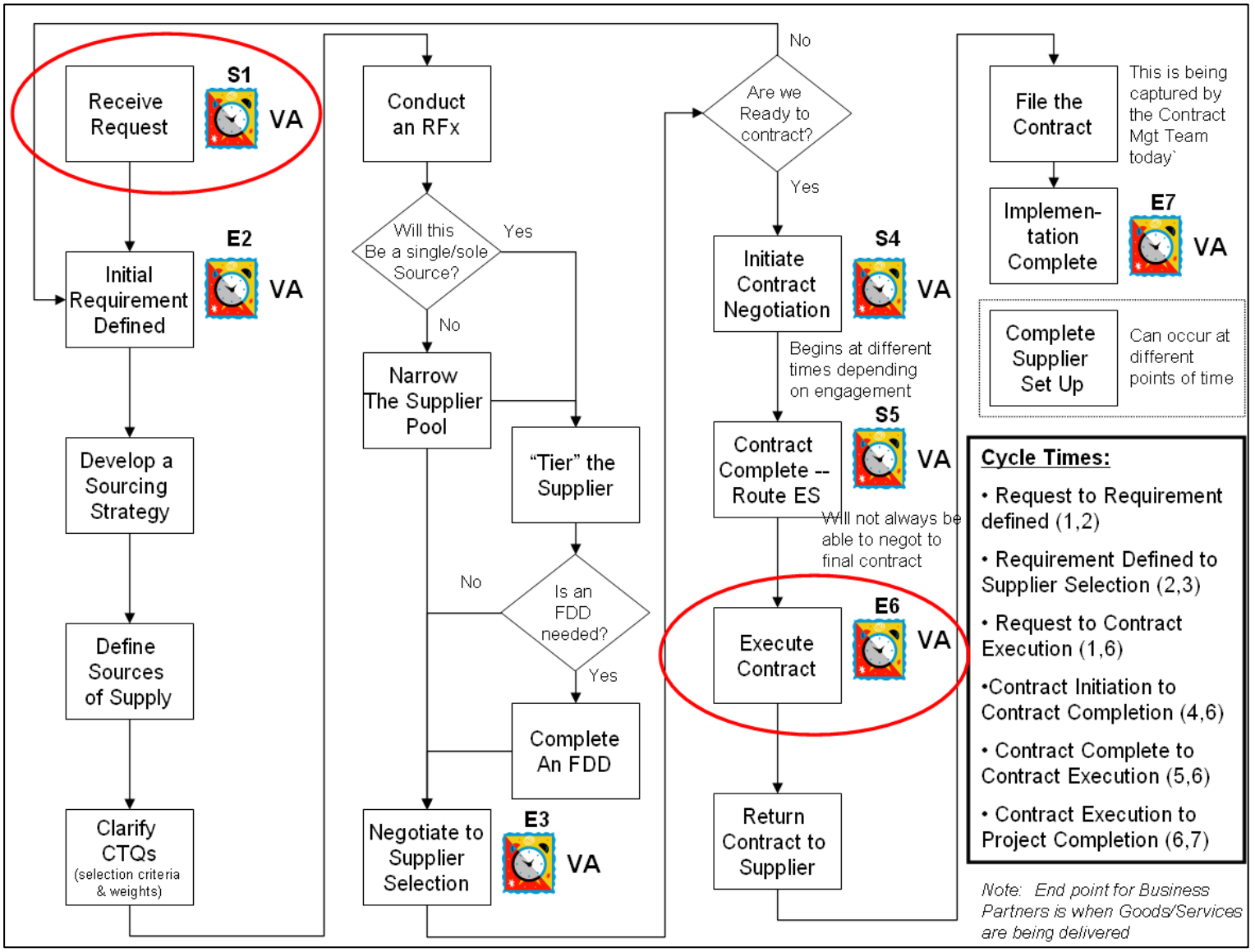
Desired state: Accurate tracking of the cycle time through the procurement process, common definition of an "initiative" and key process steps, and actionable reporting

Lean Six Sigma Guidelines

Lean Six Sigma Procurement Process Improvement Guidelines

- Robust view of the procurement process
- Data based approach
- Avoid unnecessary complexity
- If there is “low hanging fruit” – Pick it! (aka Just do it!)
- Focus on value creation:
    1. business partner/customers thinks it adds value OR
    2. has to change something AND
    3. has to be done correct the first time
- Acknowledge this is not a “once and done” activity – iterative, continuous
- Everyone participates/has a voice
- If you disagree, engage in productive, respectful debate

Request to Delivery: Time Stamps



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Lessons Learned

- "Avoid Pushing on a Rope" -- Get and keep all key business partners engaged and ***steadily foster collaboration***
- Intentionally ***drive personal and business value***
- "Eat the elephant one bite at a time" -- ***Focus on*** the criteria in ***pieces***
- "Don't build a marble stair case…" – ***Let the data guide you*** to the analysis and tools that make sense. If it's a "just do it" project then just do it!
- "Don't just squeeze the balloon" -- Think ***end-to-end process***

Power rests in the questions data inspires…
Through effective collaboration, data-based decision making, and a commitment to sustainable improvement great things can happen!

Final Words of Wisdom (not my own…)

*"**Good questions** outrank easy answers."*

– Paul A Samuelson

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