


COMPASS
Career Management Solutions



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6σ Welcome

- Why Six Sigma?
- What is 6σ?
- 6σ Processes- DMAIC
- 6σ and HR



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Below are four (4) questions and a Bonus question to test your perception, reasoning and the quickness of your logical processing. They are stated simply so you should try to answer them instantly. To assure the accuracy of the results, you should not take your time, but instead, answer each of them immediately.

OK?

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First Question:

**You are a participant in a race.
You overtake the second
person. What position are you
in?**

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Answer: If you answered that you are
first, then you are absolutely **WRONG!**
If you overtake the second person
and you take his place, **YOU** are in
second place!

**Try not to screw up next time. Now
answer the second question, but
don't take as much time as you took
for the first question, OK?**

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Second Question:

**If you overtake the last person, then
you are....?**

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■ **Answer:** If you answered that you are second to last, then you are **WRONG** again!!!

Tell me, Sunshine, how can you overtake the **LAST** person??

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Third Question:

Very tricky arithmetic!

Note: This must be done in your head only. Do NOT use paper and pencil or a calculator

Take 1000 and add 40 to it. Now add another 1000. Now add 30. Add another 1000. Now add 20. Now add another 1000. Now add 10. What is the total?

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■ **Did you get 5000?**

The correct answer is actually 4100

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■ **Fourth Question:**

**Mary's father has five daughters:
1. Nana, 2. Nene, 3. Nini, 4. Nono, and
???**

■
What is the name of the fifth daughter?

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■ **Did you Answer Nunu?**

■ ***NO!* Of course it isn't
Her name is *Mary***

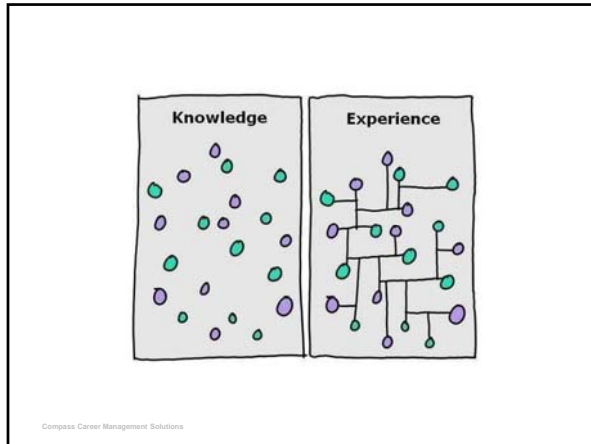
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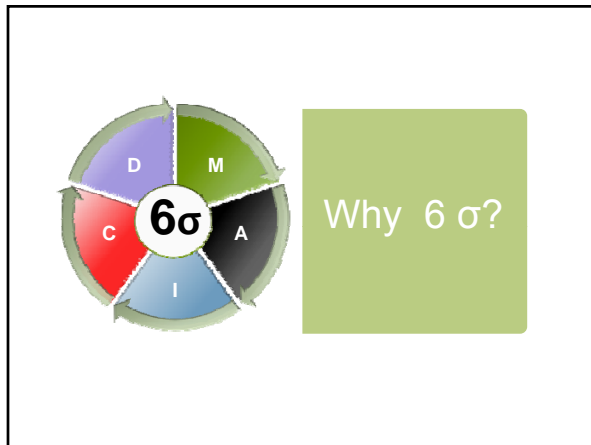


What is Strategic HR?

- Managing the people assets of the company?
- Accomplishing HR's goals?
- Based on the company's mission and vision, statement and values?
- Achieving the company's long term strategic objectives?
- Helping the company to achieve competitive advantage through its people assets?


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6σ Why 6 σ?

- Six Sigma can be the beginning of a new era for HR teams, one that has far reaching implications.
- Helps you identify what you don't know
- become strategically critical to business success
- free up time for more strategic work
- enhance business competitiveness



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■ The HR function at Raytheon has successfully applied Six Sigma to make the company's people management processes more efficient, cost-effective, and user-friendly, with the added benefit of enhancing HR's role as a full business partner with the line organization....to reduce waste from non-value-added activities

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Are any of these issues in your HR department or company ?

- | | |
|--|---|
| ■ Turnover | ■ Hiring the right talent |
| ■ Workers' Compensation Claims | ■ New Hire On-boarding |
| ■ Overtime | ■ Training activities and accountability when multiple sites are involved |
| ■ Talent Management | ■ Training Processes – (manuals vs. CDs vs. e-learning) |
| ■ Recordable Accidents | ■ Job description discrepancy, hiring manager "wants" vs. "needs" vs. Now vs. Later |
| ■ Customer satisfaction | |
| ■ Employee engagement (what are you trying to measure? How?) | |
| ■ Benefit enrollment | |
| ■ Recruiting | |
| ■ I-9 errors | |

All these are Possible projects for Six Sigma in your organization

What do they all have in common?

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What is 6σ as a concept?

- New?
- Panacea?
- Gold Ring?



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What is 6σ?

Six Sigma is a scientific, systematic, and statistical approach to business process improvement... that focuses on the customer and adding value.



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The GE Perspective

Six Sigma is a highly **disciplined process** that helps a company focus on developing and delivering **near-perfect products and services**. Why "sigma"? The word is a statistical term that **measures how far a given process deviates from perfection**.

The central idea behind Six Sigma is that **if you can measure** how many "defects" you have in a process, you can systematically determine how to **eliminate** those and approach "zero defects".

Six Sigma has changed the DNA at GE – it is the way that GE works – in Everything that GE does and in every product GE designs.

"What is Six Sigma? The Roadmap to Customer Improvement"
www.ge.com/sixsigma/makingcustomers.html

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Defined

- It is a structured methodology that focuses on the **customer's definition of quality**
- It is a **data-driven, cause and effect** way of thinking
- It applies the scientific process of experimentation to business process
- It uses **statistical** methods to test hypotheses
- It is based on the Greek letter sigma (σ), which is used in statistics to denote **VARIANCE**

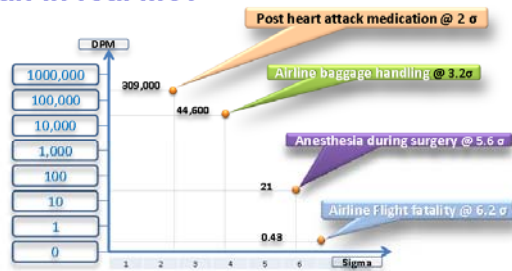
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6σ Sigma Levels

Sigma	% Good	% Bad	DPMO
1	30.9%	69.1%	691,462
2	69.1%	30.9%	308,538
3	93.3%	6.7%	66,807
4	99.38%	0.62%	6,210
5	99.977%	0.023%	233
6	99.9997%	0.00034%	3.4

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So .. What does Six Sigma levels mean in real life?



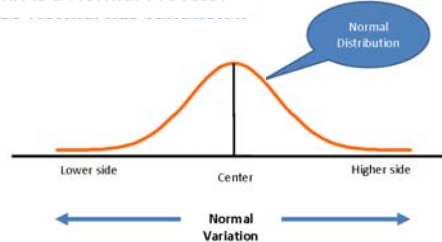
Source: Robert G. Ivin & Mike Harty

Chart by Dr. Ahmed Kamel, Business Advantage

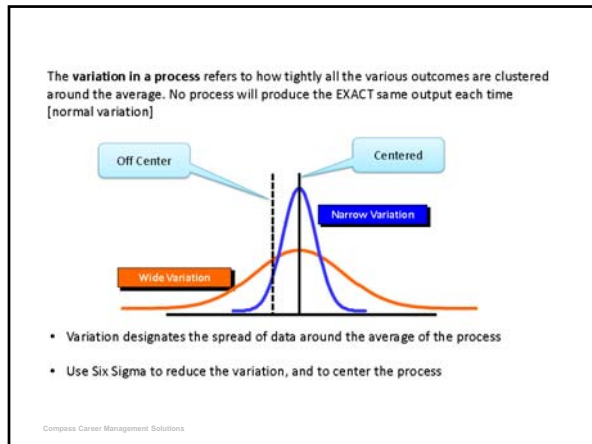
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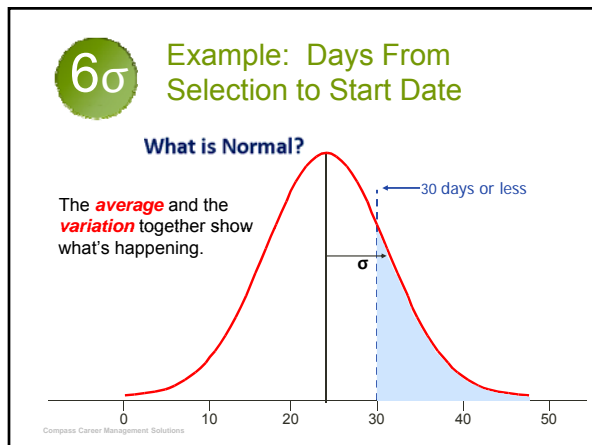
What is Normal?

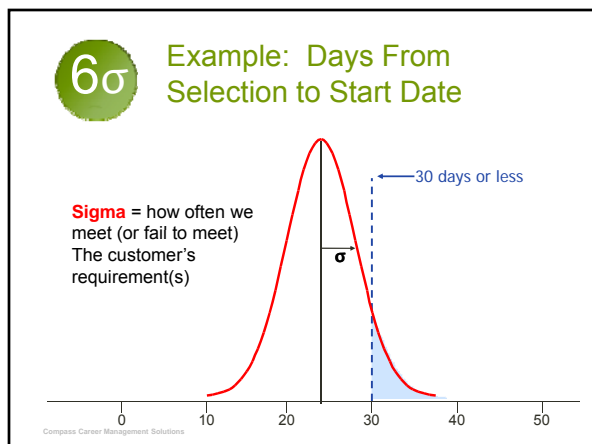
What is a Normal Process?



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History: The Crusade

- Motorola was having serious quality issues in the 1970s; adopted a Japanese approach
- 1980s Motorola rolled out four-point plan
- 1982 the CEO set an annual goal of halving costs – Six Sigma Concept and term was coined
- 1984 Motorola Manufacturing Institute
- Six Sigma* was registered June 11, 1991
- 1993 Allied Signal adopts
- 1995 GE's CEO Jack Welch supported and spread 6σ throughout GE

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Who uses it?



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Who is using Six Sigma?

Service function examples:

- Finance
- Legal
- Marketing
- Sales
- Human resources



Service business examples:

- Health care
- Banking
- Internet commerce
- Food service
- Retail sales

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Why 6σ?

- Strategic Contexts
- Notorious bottom-line orientation & results
- Adaptable to multiple bottom lines
- Process orientation
- Focus on the customer
- Successful track record elsewhere
- Everyone's doing it
- Get your ducks....



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Cost Reductions

Cost of Poorly Performing Processes (CP³)

σ level	DPMO	CP ³
2	308,537	Not Applicable
3	66,807	25%-40% of sales
4	6,210	15%-25% of sales
5	233	5%-15% of sales
6	3.4	< 1% of sales

Each sigma shift provides
a 10% net improvement

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Why it works:

- "When you measure what you are speaking about and express it in numbers, you know something about it" Lord Kelvin, British Physicist
- "If we don't know what we don't know; we can't act on what we don't know; we won't know until we search; we won't search for what we don't question; we don't question what we don't measure" Mikel Harry, Six sigma SME
- If you don't know where you are going, you might wind up someplace else. Yogi Berra, famous New York Yankees Philosopher

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6σ Why it works....

- Facts tell; emotions sell
- Changes our thought processes and approach
- Manages risks to take a risk
- Human Resources and Business Alignment

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6σ Why it will work in HR....

- All work occurs through processes.
- Processes provide information and data that can be used to improve them.
- All processes have "hidden factors" that add cost and reduce output.
- Undesired variation is a common source of process problems

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HR in the Organizational Dynamics



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Applications in HR

Process	Potential Measures
Annual Enrollment	# of exceptions processed; Length of time for EE to complete
New Hire	# of new hires who stay at least 2 years
Recruiting	Length of time between first applicant contact with the firm and applicant is contacted by the firm
Performance Appraisal	# of reports not completed on time; Average # of days to complete by mgrs
Compliance Reporting	Length of time to complete
Employee Development	# of people annually who do not complete training identified on development plans

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DMAIC Process

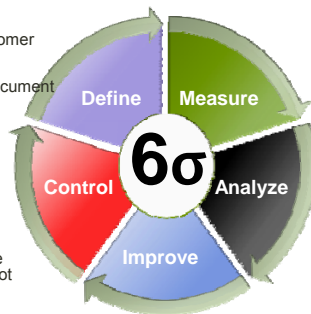
Define the problem and customer requirements.

Measure defect rates and document the process in its current incarnation.

Analyze process data and determine the capability of the process.

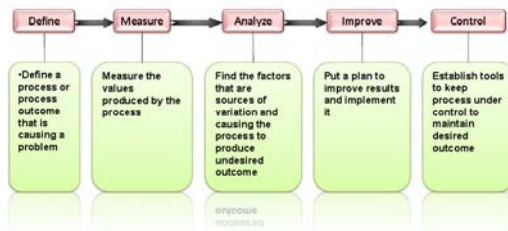
Improve the process and remove defect causes.

Control process performance And ensure that defects do not recur.



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Six Sigma Steps



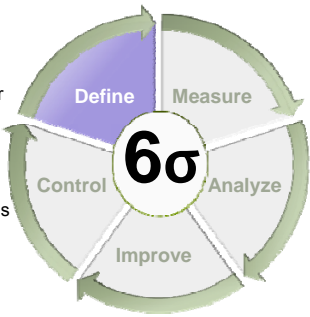
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6σ Define Phase

Key Activities

- Identify project CTQs: what does the customer think is essential?
- Create the Project Charter
- Define and build a process map that relates measurable internal processes to customer needs.

$Y = f(X)$



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6σ VOC – What Is Important?

Voice of the customer

- Who is the customer and what do they want?
- This may be derived from:
 - Business Goals
 - Complaint Information
 - Customer Surveys or Focus Groups
 - Benchmarking Data
 - Executive-Level Discussions
 - Job-Specific Discussions

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6σ Project Objectives

- Project Objectives
 - What the project hopes to accomplish
 - Develop problem and goal statements
 - Quantify the pain with data



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Project Business Case

- Why this particular project is important
- May include the following:
 - Description of the business opportunity
 - Cost/Benefit Analysis
 - Risk analysis
 - Potential threats to success
- Project assumptions should be clearly stated

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Sample Business Case Template

Stem	Project Information
The performance of	Our new hire start process
Isn't meeting the goal of	Getting applicants from the completion of the selection process to their first day on the job in less than 30 days
In the area of	Exempt hires
This results in	Frustration on the part of hiring manager, current employees and the new employee, and missed opportunities on next in line candidates
Causing these negative effects	In the near term potential project delays and in the longer term, starting people off on the wrong foot increases turnover

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Define/Select a Project

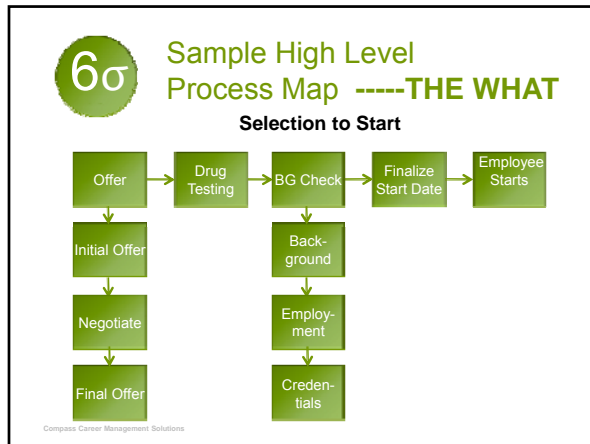


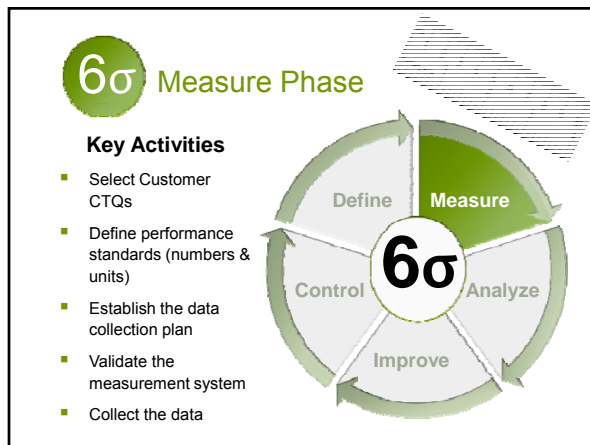
Selecting a Project:

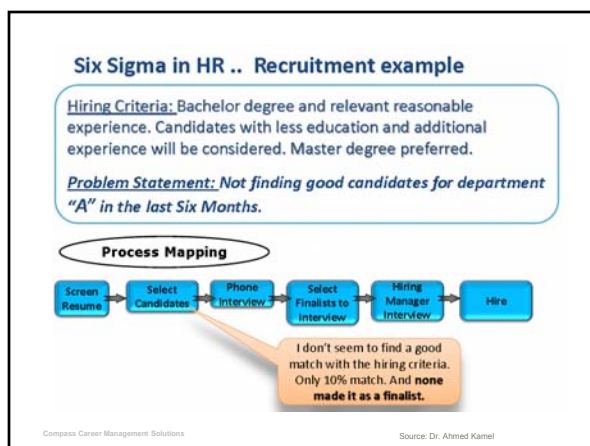
- Contains a **process**
- Has feasibility
- Has a measurable impact
- Provides potential for improvement
- Has resource support within the organization



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Six Sigma in HR .. Recruitment example

DEFINE

Applying Six Sigma in Recruiting

CTQs (Hiring Criteria)	Quantified Criteria
Bachelor Degree	16
Relevant Experience	10
Total	26

Problem:
Not finding good candidates

Quantify the Hiring Criteria:

Factors critical to the quality [CTQ] of a candidate are:
Educational Level, and
Length of Experience.

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Source: Dr. Ahmed Kamel

Six Sigma in HR .. Recruitment example

MEASURE

Candidates
20
22
25
27
27
24
24
28
29
23
25
21
26
22
23

We have 15 candidates of which 14 are not meeting criteria [errors]
This is 933,333/1,000,000 DPMO. This is equivalent to 1.5 Sigma level.

933,333 at LESS than 1 sigma level

Sigma Level	Defects per 1,000,000
2	309,000
3	66,800
4	6,210
5	233
6	3.4

Source: Dr. Ahmed Kamel

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6σ Analyze Phase

Key Activities

- Establish process capability
- Define performance objectives
- Identify variation sources



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Improve Phase

Key Activities

- Identify causes of variation
- Discover variable relationships
- Pilot solutions

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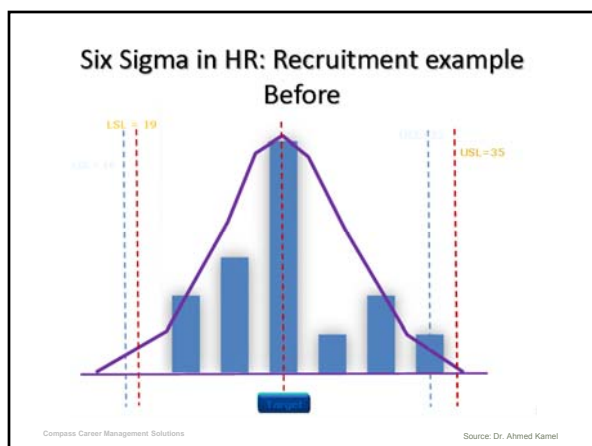
Achieving Six Sigma

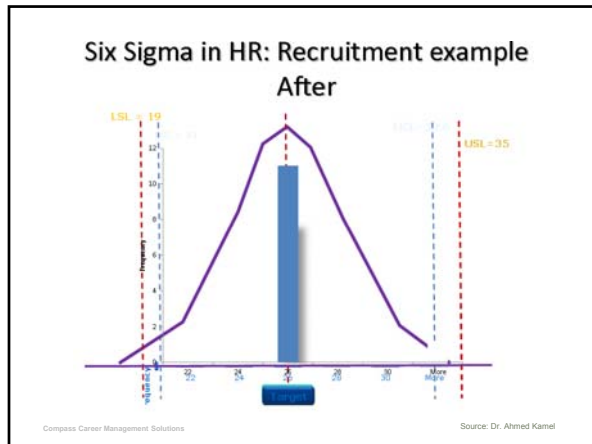
How to Improve

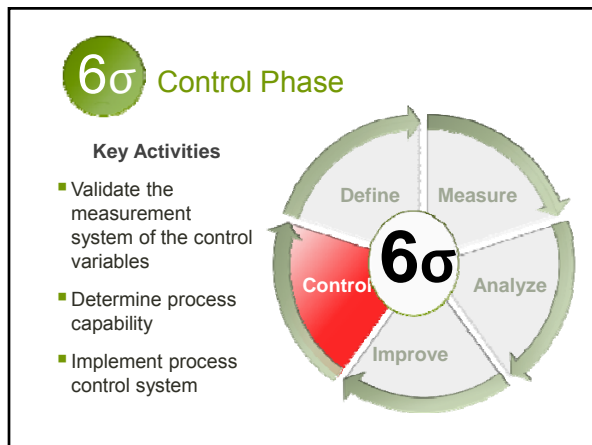
Improve the mean

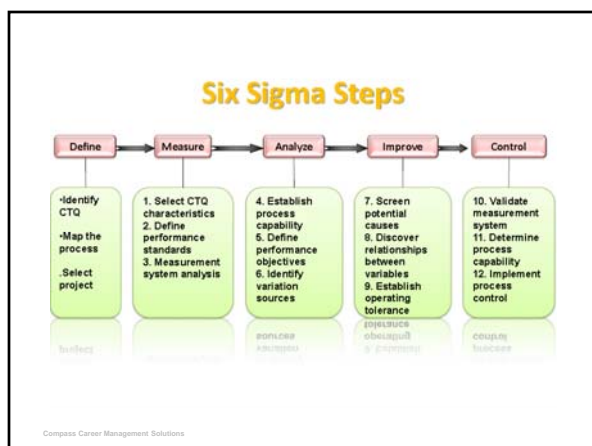
Reduce the variation

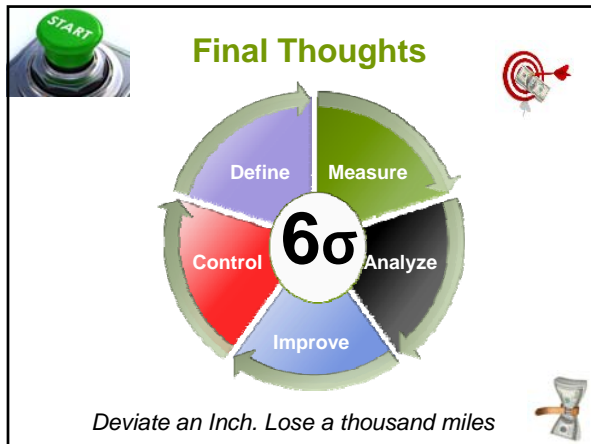
Change the limits













6σ Resources

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www.webpages.uidaho.edu/~redgeman/

Gitlow, H., & Levine, D. (2005). *Six Sigma for Green Belts and Champions*.
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