

# Memorandum



CITY OF DALLAS

DATE January 15, 2016

TO Honorable Mayor and Members of the City Council

SUBJECT **Center for Performance Excellence Update**

On Wednesday, January 20, 2016, the City Council will be briefed on the Center for Performance Excellence Update. The briefing materials are attached for your review.

Please let me know if you have any questions or need additional information.

A handwritten signature in black ink, appearing to read 'Mark McDaniel'.

Mark McDaniel  
Assistant City Manager

c: A.C. Gonzalez, City Manager  
Warren M.S. Ernst, City Attorney  
Craig D. Kinton, City Auditor  
Rosa A. Rios, City Secretary  
Daniel F. Solis, Administrative Judge  
Ryan S. Evans, First Assistant City Manager  
Eric D. Campbell, Assistant City Manager  
Jill A. Jordan, P.E., Assistant City Manager  
Joey Zapata, Assistant City Manager  
Jeanne Chipperfield, Chief Financial Officer  
Sana Syed, Public Information Officer  
Elsa Cantu, Assistant to the City Manager – Mayor & Council



# Center for Performance Excellence Update



# Mission

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- The Mission of the Center for Performance Excellence (CPE) is to:
  - Facilitate best-in-class levels of performance across the City of Dallas organization through an **integrated systems approach that achieves results**
  - Identify and **share best local government management research and improvement practices** across the region, state and nation
    - Click on the link below for national news story:  
<http://www.routefifty.com/2016/01/dallas-cpe-performance-management/124811/>

# Why was the CPE created?

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## Bottom line:

- To examine how we can provide services to citizens more efficiently and effectively through the disciplined application of proven management systems

## Goals

- **Reduce Costs** (Current and Future)
- **Enhance Responsiveness** for citizens/customers
- **Increase Capacity** of existing workforce (saving time)
- **Motivate Workforce:** Employee Empowerment + Job Enrichment = Productive Team Members
- **Improve Organizational Communications** leading to "Cross Pollination" of ideas for improvement
- **Leverage Partnerships** by applying best practices



# Additional Expectations

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- A consulting resource for **empowerment**, rather than separate teams of compliance specialists
- An **R&D lab** for taking calculated “risks” to innovate
- A tool for **connecting employees** to the organization’s vision, mission and purpose
- An understanding that **growth and comfort do not co-exist**
- A **marathon**, not a sprint!

# How Will the CPE Achieve These Goals?

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Through the application of **performance improvement tools** throughout the City, such as:

1. **Lean Six Sigma**
2. **Performance Measurement, Benchmarking & Surveying**
3. **Business Planning** (Using the Baldrige Framework)
4. **ISO 9001** (Quality Management Systems)
5. **Training & Idea Exchange**

# Inter-relationship of Efforts for Accountability



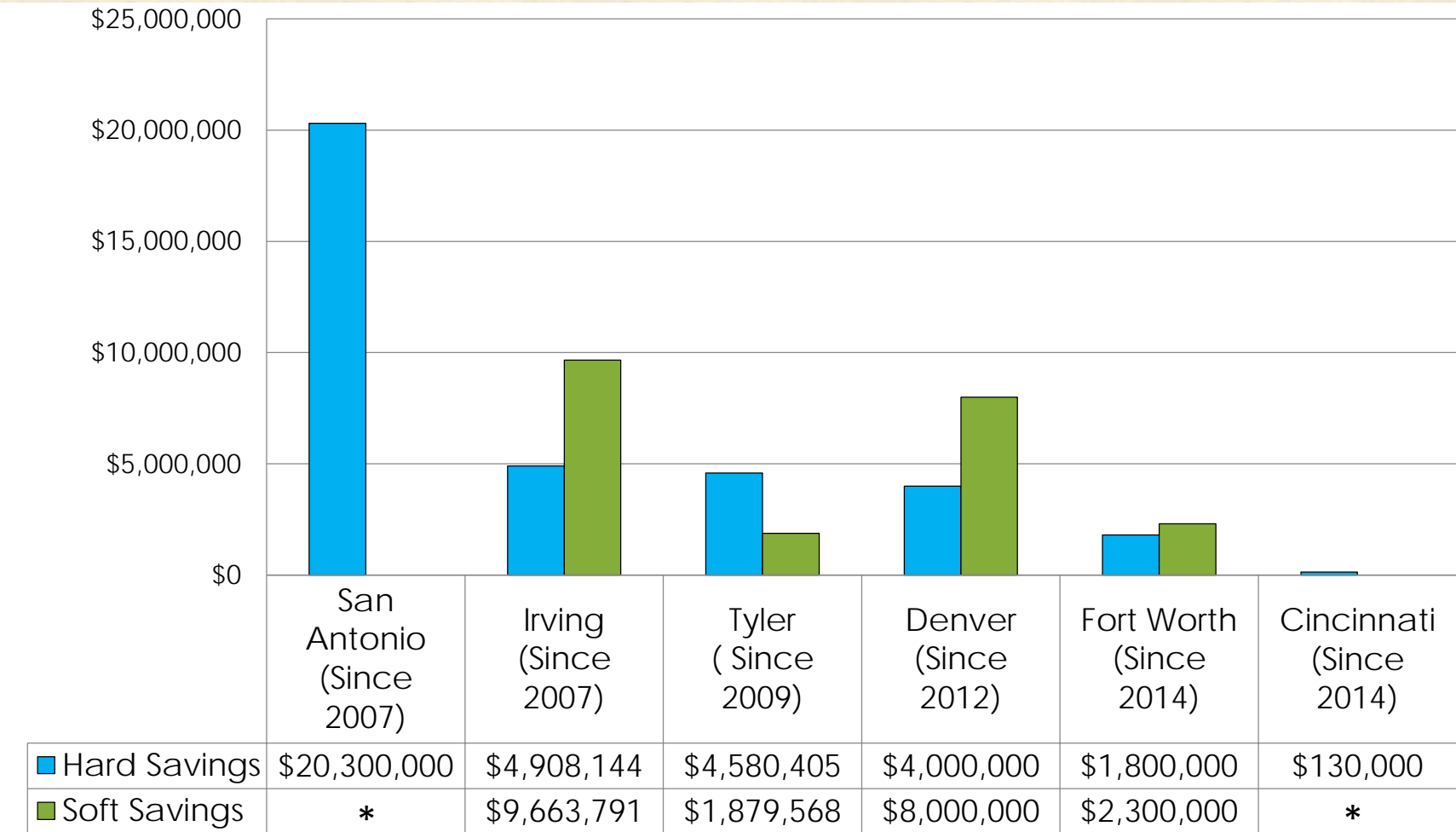


# Lean Six Sigma



Some Early Adopters –

# What Other Cities Are Doing



*\*Soft savings not tracked by these cities.*

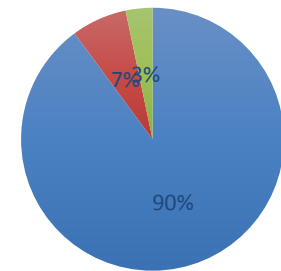
# Defined Potential Savings, to Date

## For 28 Projects Fully Defined, to Date

- Projected Hard Savings           **\$2,541,453\***
- Projected Soft Savings            **1,069,978\***
- Projected Total Savings         **\$3,611,431\***

\* Actual savings are confirmed upon project completion.  
Soft savings include time, supplies on hand, etc.

Potential Savings by Fund



■ General ■ Enterprise ■ Internal Services

Note: Projected hard savings so far roughly equivalent to annual cost of operating four branch libraries, or one fire station.

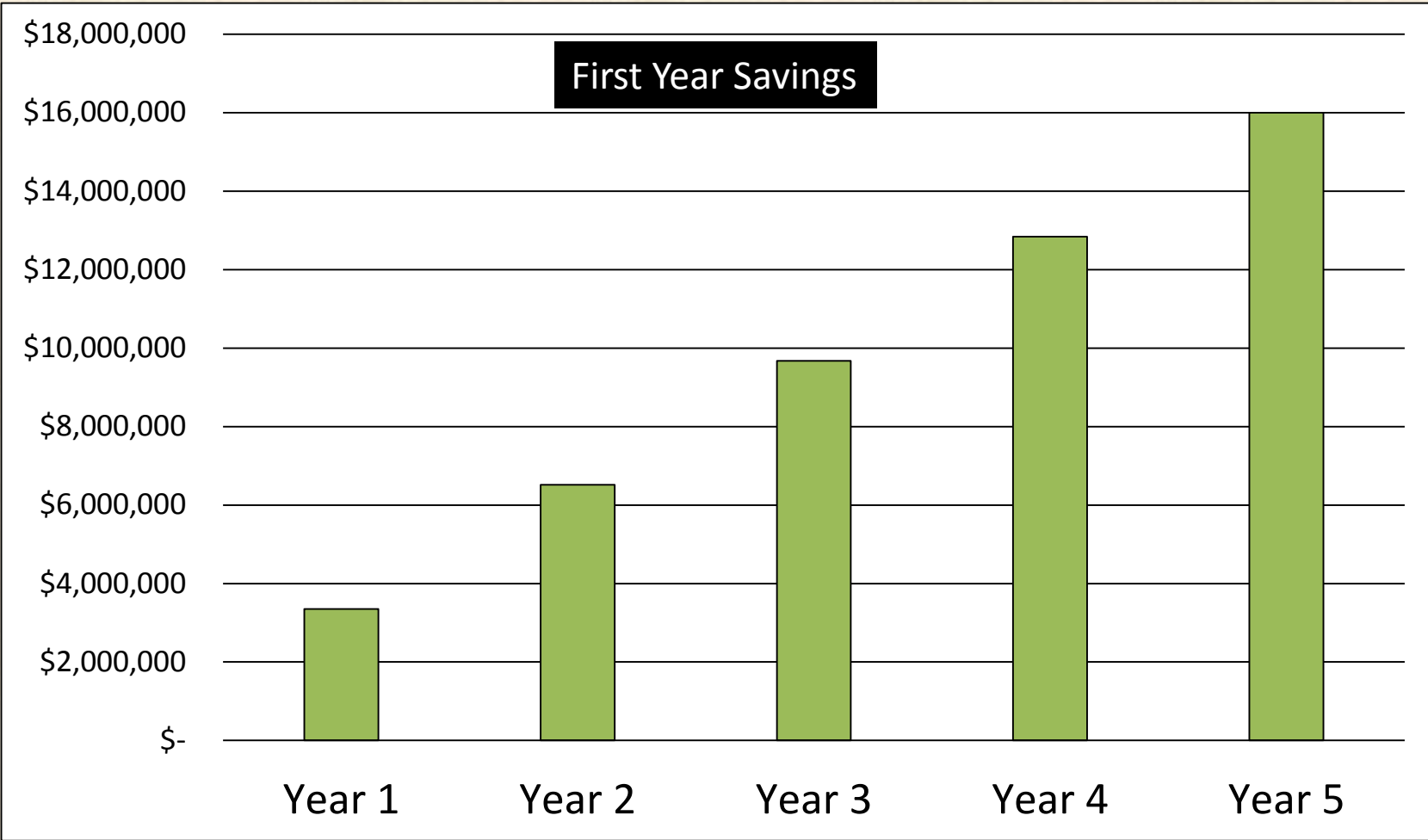
## FY 2015-16 Goals:

Return on Investment - 75% (**will exceed**)

Projects Completed – 80

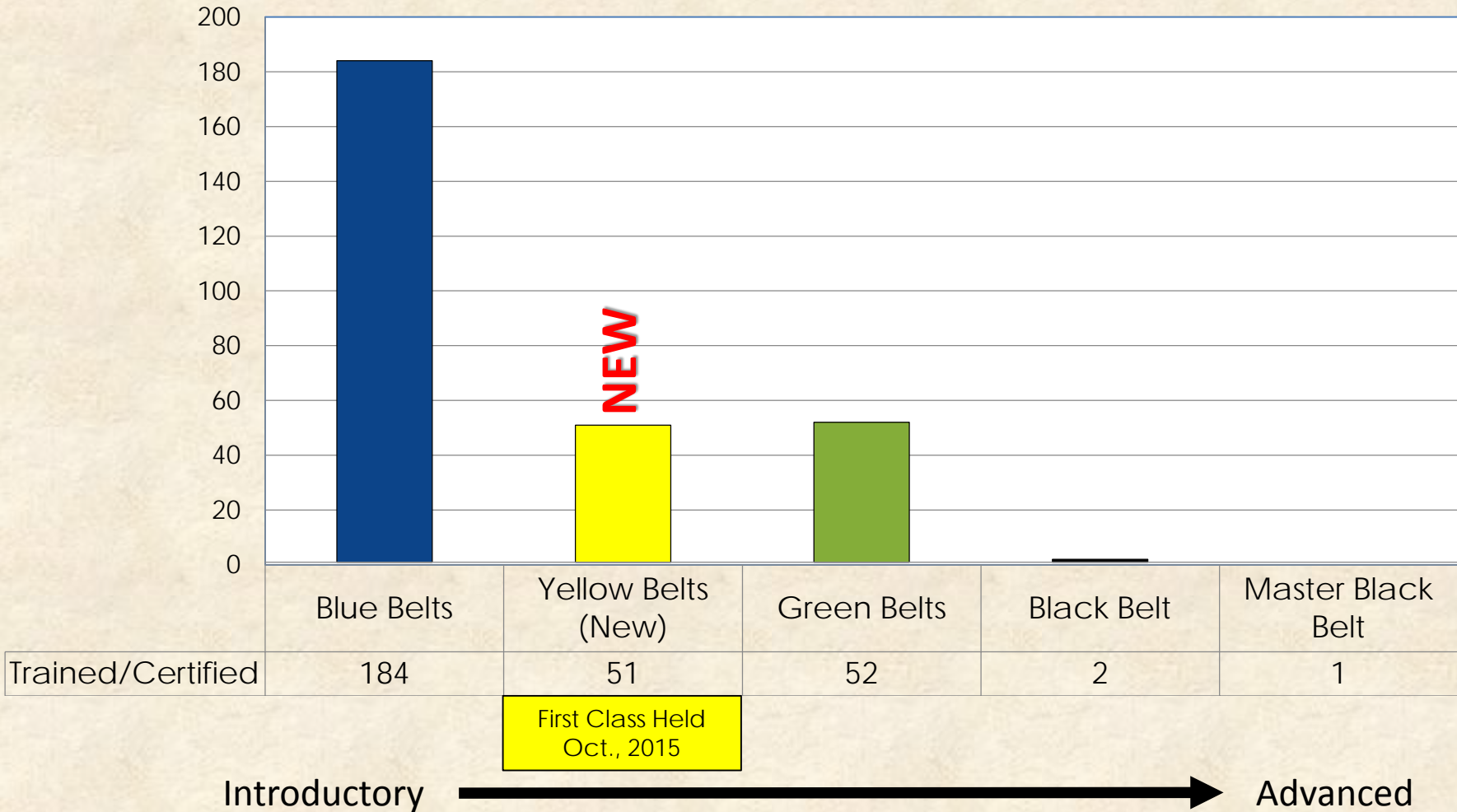
Training – 200 Employees (**will exceed**)

# Longer Term Savings Trajectory



*Assumptions: Increase of 50 projects/year, average of \$84,318/project, and 75% project completion rate/year.*

# Employee Training to Date





# How are Projects Identified?

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Projects are identified through a variety of means, including but not limited to:

- Annual **Sunset reviews**
- Twice annual **departmental business plan** reviews
- Annual **budget** process
- Council **suggestions**
- Customer **feedback/surveys**
- Employee suggestions (**yellow belt training**)
- Internal & ISO **audits**
- Business intelligence/performance **analytics**
- **Continuity of Operations** (COOP) assessment

# Sampling of Projects

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**311** – Improve Performance of Dispatch

**Aviation** – Reduce mowing cost at Executive Airport

**City Attorney** – Improve Contract Review Time

**Code Compliance (4)** – Improve NOORP Registration Process; Improve Scheduling Process; Court Assignment Process; Reduce Time from Issuance of Citation to Delivery to Court

**Dallas Water Utilities (6)** – Improve Lateral Card Process; Improve WWC TV Data Matching; Improve the Move-In Process; Improve Distribution Line Locates; Reduce Duplicate Service Requests; Improve Measurement of Irrigation Inspection Effectiveness

**Emergency Management** – Reduce Grant Cycle Time

**Equip./Bldg. Services** – Improve Salvage Yard Inventory Process

**Fire (3)** – Reduce Overtime; Improve Inventory Control for EMS; Reduce Nuisance or False Fire Alarm

**Human Resources** – Improve Hiring Process

# Sampling of Projects (Continued)

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**Municipal Court** – Improve court assignment/scheduling process

**Office of Environmental Quality** – Reduce Hose Rupturing in Sanitation

**Parks (2)** – Reduce Equipment Shop Work in Progress; Improve Athletic Field Reservation Process

**Police (2)** – Improve Vehicle Registration & License Process; Improve Property Intake

**Sanitation** – Reduce Overtime at McCommas Bluff Landfill

**Streets (2)** – Improve Street Restoration Process; Improve Pothole Costing Variance

**Sustainable Development** – Improve License & Invoice Process

**Sustainable Development** – Improve Timeliness of Engineering Plan Review

**Trinity Watershed Management** – Improve Recovery Process for Spills






# Second Quarterly Green Belt Project Report Out

**Lean Six Sigma**  
Center for Performance Excellence

## LEAN SIX SIGMA PROJECT REPORT OUT

January 28, 2016  
1:30 - 3:30 p.m.  
Dallas City Hall, L1F Auditorium

The Dallas Center for Performance Excellence (CPE) invites you to a Lean Six Sigma project report out in various stages of execution. Selected projects will be presented by current Green Belts. Come and go as your schedule allows, or spend the whole time with your fellow team members.

 Define     Measure     Analyze     Improve     Control

Guillermo Garcia  
Lean Six Sigma | Innovation Manager  
Guillermo.Garcia1@dallascityhall.com  
214.671.9215

DALLAS  
Center for Performance Excellence





# Performance Measurement, Benchmarking & Surveying

# Former Display & Use of Performance Data

The City has used **Performancesoft** software for many years to track and publicly display performance data by department

## Issues with display

- Difficult to navigate
- Unable to provide additional measure information
- Visually unappealing

**Library**

Book Contents

Survey - Code

Survey - Maintenance of Infrastructure

Survey - Public Safety

**Citizen Survey - Most Important Services**

**Description**

This book provides performance measures on services that citizens identified as most important in the 2014 Citizen Survey. Sections display measures in five categories: Public Safety, Infrastructure, Solid Waste services, Public Information services, and Park and Recreation

**Contact Information**

dallasmeasures@dallascityhall.com

**Dallas Measures**

**Table of Contents**

[Survey - Code](#) This section shows key measures that illustrate the City's efforts at Code Compliance

[Survey - Maintenance of Infrastructure](#) This section shows key measures that illustrate the City's efforts at street repair and street lighting

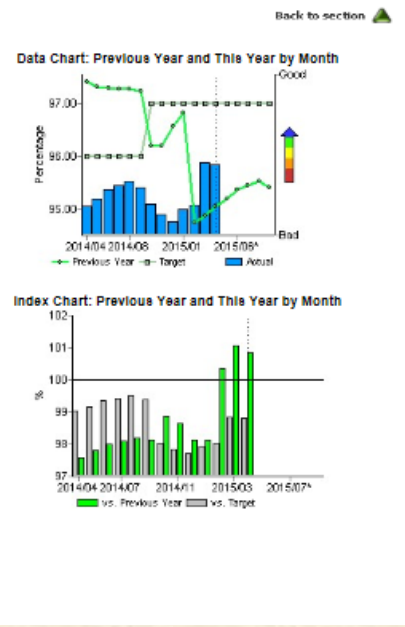
[Survey - Public Safety](#) This section shows key measures that illustrate the City's efforts in crime prevention, police response time and animal control.

**\* % Street Lights Working (Street Services)**

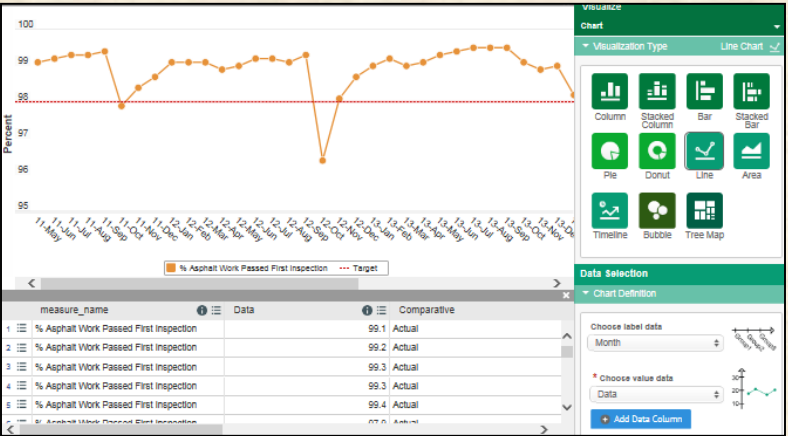
**Description**  
Percentage of those street lights surveyed, total percentage of working lights.

**Notes**  
Index Colors / Ranges Legend:  
 • Blue 5 - Excellent 100%  
 • Green 4 - Good 90%  
 • Yellow 3 - Caution 80%  
 • Orange 2 - Poor 75%  
 • Red 1 - Very Poor

Data Table: Previous Year and This Year by Month						
Percentage	Actual	Target	Target % Variance	Target Index	Previous Year	Previous Year % Variance
2014/04	95.06%	96.00%	(1.0%)	95.0%	97.43%	(2.4%)
2014/06	95.20%	96.00%	(0.8%)	95.2%	97.33%	(2.2%)
2014/08	95.37%	96.00%	(0.7%)	95.3%	97.31%	(2.0%)
2014/07	95.44%	96.00%	(0.6%)	95.4%	97.26%	(1.8%)
2014/08	95.53%	96.00%	(0.5%)	95.5%	97.26%	(1.8%)
2014/09	95.42%	96.00%	(0.6%)	95.4%	97.25%	(1.8%)
2014/10	95.10%	97.00%	(2.0%)	95.0%	96.20%	(1.1%)
2014/11	94.90%	97.00%	(2.2%)	97.8%	96.20%	(1.4%)
2014/12	94.77%	97.00%	(2.3%)	97.7%	96.57%	(1.8%)
2016/01	95.00%	97.00%	(2.1%)	97.9%	96.83%	(1.8%)
2016/02	95.08%	97.00%	(2.0%)	98.0%	94.74%	0.4%
2016/03	95.88%	97.00%	(1.2%)	98.8%	94.88%	1.1%
2016/04	95.84%	97.00%	(1.2%)	98.8%	95.06%	0.8%
2016/06*		97.00%			95.20%	
2016/08*		97.00%			95.37%	
2016/07*		97.00%			95.44%	
2016/05*		97.00%			95.53%	
2016/09*		97.00%			95.42%	



# New Dallas Data Points



About Dallas Data Points Feedback

The City of Dallas, through leadership of the Mayor and City Council, strives to achieve progress in five Key Focus Areas (KFAs):

- Public Safety
- Economic Vibrancy
- Clean, Healthy Environment
- Culture, Arts, Recreation and E-Gov

Click deeper into the tiles to view priorities.

A.C. Gonzalez | City Manager  
"We Make Big Things Happen"

### Percent of Street Lights Working

The City of Dallas has a contract with ONCOR Electric Delivery to maintain 85,000 street lights citywide. To expedite your repair, it is best to enter the information directly into the ONCOR customer service website.

This measure tracks the percent of street lights working on arterials. The measure is utilized to determine ONCOR maintenance responsiveness. Surveys are conducted along arterials routes to determine non-working bulbs. High values are good.

Date	% Asphalt Work Passed First Inspection
11-Mar	99.1
11-Jun	99.2
11-Jul	99.3
11-Aug	99.3
11-Sep	99.3
11-Oct	99.3
11-Nov	99.3
12-Jan	99.3
12-Feb	99.3
12-Mar	99.3
12-Apr	99.3
12-May	99.3
12-Jun	99.3
12-Jul	99.3
12-Aug	99.3
12-Sep	99.3
12-Oct	99.3
12-Nov	99.3
13-Jan	99.3
13-Feb	99.3
13-Mar	99.3
13-Apr	99.3
13-May	99.3
13-Jun	99.3
13-Jul	99.3
13-Aug	99.3
13-Sep	99.3
13-Oct	99.3
13-Nov	99.3
14-Jan	99.3
14-Feb	99.3
14-Mar	99.3
14-Apr	99.3
14-May	99.3
14-Jun	99.3
14-Jul	99.3
14-Aug	99.3
14-Sep	99.3
14-Oct	99.3
14-Nov	99.3

Explore the data

## Improvements with display

- Easy to navigate
- Ability to modify charts
- Include historical data
- Addition of narratives to build measure information



## New Dallas Data Points (Continued)

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- Improved **public dashboard** for greater transparency regarding performance
  - **35,000 visits** since October, 2015
- **Live Demonstration:**  
<https://datapoints.dallascityhall.com/>



# Benchmarking

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- Provides a service for communities to collect, report & analyze data
- Allows City to set **benchmarks and standards for performance** in comparison to other jurisdictions



A Center for Performance  
Excellence **Strategic Partner**

**Service has migrated to a more nimble software platform to provide more timely comparative data in several service areas**

- **Internal Services** (Gen. Gov., Procurement, Risk)
- **Neighborhood Services** (Code, Permits)
- **Public Safety** (Fire/EMS, Police)
- **Public Works** (Facilities, Fleet, Highways/Roads, Solid Waste)
- **Social Services** (Housing)
- **Culture & Leisure** (Library, Parks)

# Benchmarking (continued)

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Typically benchmark against cities with population over 500,000

- **ICMA Cities:** Austin, Fort Worth, Las Vegas, Oklahoma City, San Antonio, Phoenix, and Charlotte
- **Non-ICMA Cities:** Chicago, Houston, Philadelphia, San Diego, Columbus, El Paso, Memphis, Indianapolis, Jacksonville

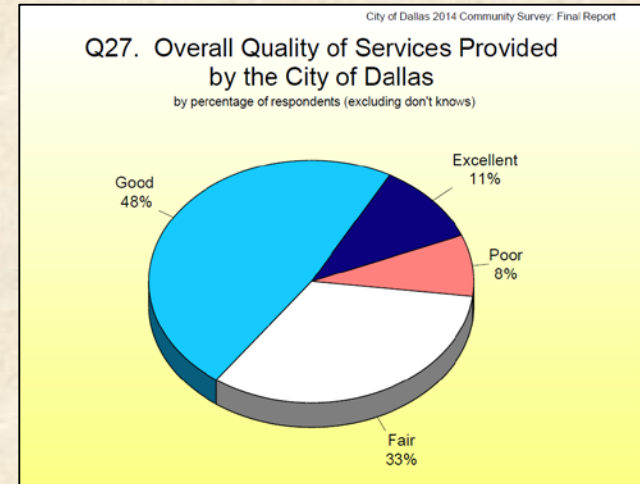
ICMA performance data will be:

- Integrated into Dallas Data Points
- Shared with directors and used as a tool in regular business planning

# Citizen & Business Surveys

## Citizen Survey

- Typically conducted every other year with next survey in FY16
- Allows City to assess quality of services, track performance over time, & identify opportunities for improvement



## Business Survey

- Last survey conducted 2008 with next survey now underway
- **Results to be presented to City Council February, 2016**
- Final result will be a statistically valid sample of 100 completed surveys in each Council district with a 95% confidence level

# Internal Surveys

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## Types of Surveys

- Organizational/team assessment, change management evaluation, internal customer service evaluation

## Current

- 311, Human Resources, Risk Management, Benefits, Ethics & Diversity, Intergovernmental Services, Purchasing, Office of Financial Services, Equipment & Building Services
- 84 surveys designed and administered in FY15

## Next

- Communication & Information Services, Center for Performance Excellence, Controller's Office, Civil Service, City Secretary's Office, Public Information Office, Office of the City Auditor





# Business Planning

## (Applying the Baldrige Framework)

# The Baldrige Framework

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- The **Baldrige** framework was created by the US Congress in 1987 as Public Law 100-107
- Provides the **discipline** and the **scorecard** that organizations need to be accountable to their governing bodies, constituents and employees
- Managed by the **National Institute of Standards and Technology**, an agency of the U.S. Department of Commerce
- Promoted at the state level through **Texas Quality Foundation** (state affiliate)
- Strategic partnership with the **American Society for Quality** (ASQ)

# Accountability Through Scoring

**Criteria 1** | Leadership (120 points)

**Criteria 2** | Strategy (85 points)

**Criteria 3** | Customer (85 points)

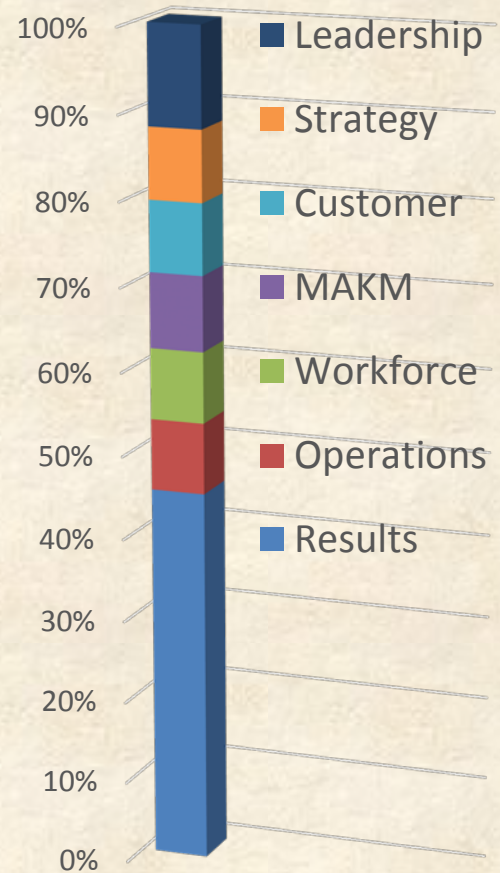
**Criteria 4** | Measurement, Analysis, & Knowledge Management (90 points)

**Criteria 5** | Workforce (85 points)

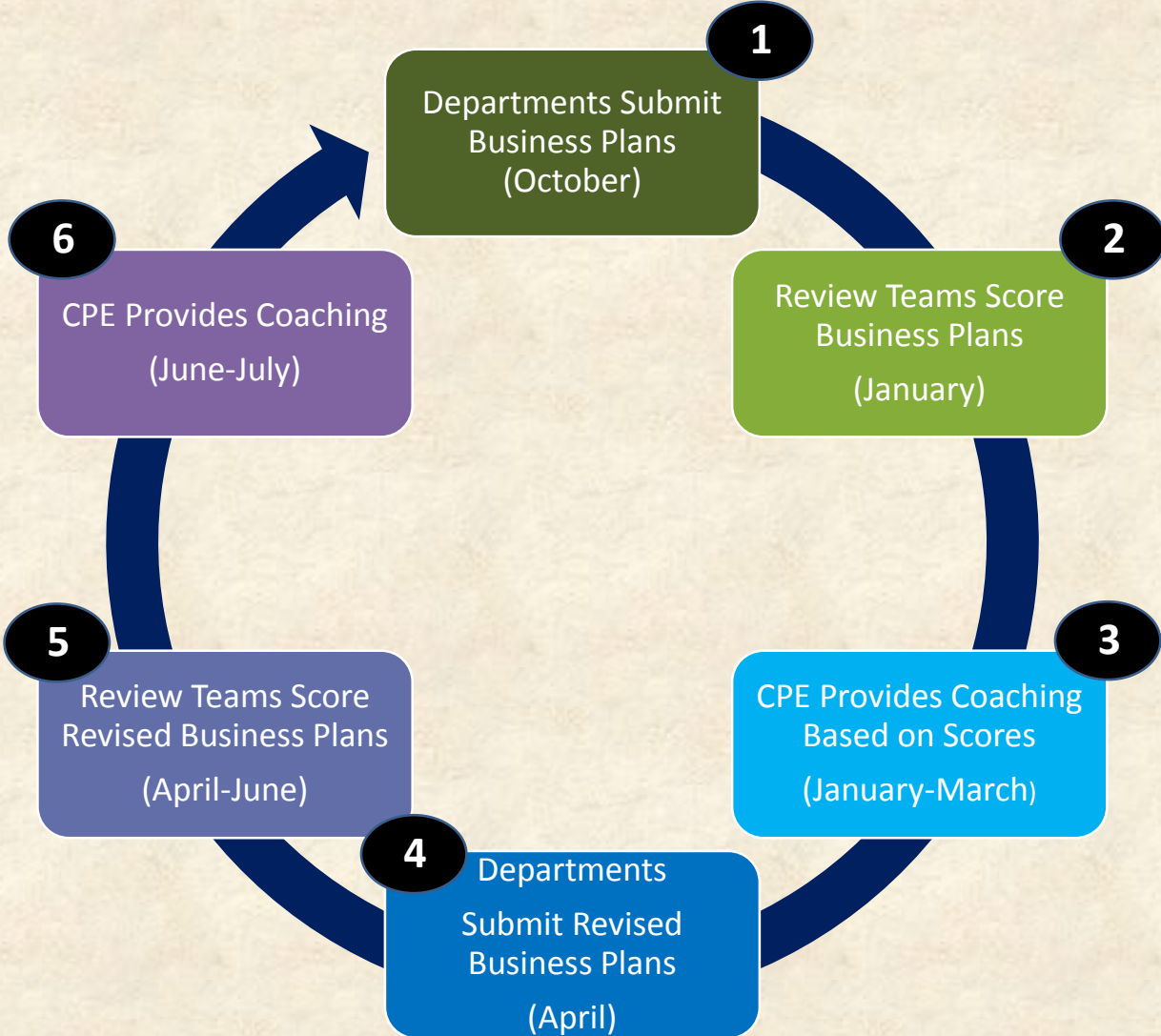
**Criteria 6** | Operations (85 points)

**Criteria 7** | Results (450 points)

**Total possible points = 1,000**



# Business Plan Review Process





# Business Plan Review Teams

## Review Team Composition

- 27 members (**five teams**) from various departments
- Each team led by a team leader and assigned CPE champions and CPE staff members to provide oversight and support



## Reviewer Training

- Provided introductory high level overview of Baldrige criteria and how framework will be used in business planning
- Provided in-depth knowledge of Baldrige criteria and scoring methodology





# Quality Management Systems (ISO 9001)

# What is ISO?

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The **International Organization for Standardization (ISO)** establishes rigorous standards for management in various types of business operations using **three management systems**:

- **Environmental (ISO 14001)**

Began in 2005, focuses on reducing environmental impacts of operations and regulatory compliance - 11 full departments certified

- **Quality (ISO 9001)**

Began in 2006 focuses on operating more efficiently and meeting the needs and expectations of our customers - 9 full departments & 3 partial departments certified

- **Occupational Health and Safety (OHSAS 18001)**

Began in 2007, focuses on improving our health and safety performance - 7 full departments certified

# The Value of ISO

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- Improved **consistency** of service and product performance
- Higher **customer satisfaction** levels
- Improved **productivity** and **efficiency**
- **Cost reductions**
- Improved **communications, morale** and **job satisfaction**
- Reduced **defects** from 3% to 0.5%
- 40% reduction in product **cycle time**
- Estimated **return on investment** for companies with consistent compliance have been reported +30% to +600%

**Source:** Dun and Bradstreet, Dallas Business Journal, manufacturingnews.com as reported by American Society for Quality



# Re-engineering Deployment of ISO 9001



Upon the 10 year anniversary of ISO 9001, we are **“re-engineering”** our deployment strategy

- **Independent Auditing**
  - Existing contract renegotiated for single, rather than three separate certifications. Services also include bringing on additional departments and transitioning to updated ISO standards. Impact = \$29,873 savings in FY16 and \$240,000 over remaining four year term
- **Decentralization**
  - Reduction of ISO auditors headquartered in CPE with the intent to push out more training and coaching rather than focusing only on compliance
- **More Robust Reporting**
  - Enhance performance reporting on findings and direct benefits





# Training & Idea Exchange

# Class Offerings

- Critical thinking
- Customer service "3 R's of Service"
- Lean Six Sigma
- Project management
- Business writing
- Open enrollment in general ISO courses
- Use of Alliance for Innovation Knowledge Network
- Emerging Leader program

**Attendance = 2,403 To Date**



The City of Dallas Center for Performance Excellence (CPE) is pleased to announce BIG Academy.

BIG Academy provides training and development opportunities for City employees to obtain the tools and resources to make BIG things happen in the Dallas community.



**We Make BIG Things Happen!**

BUILD	INNOVATE	GIVE
<ul style="list-style-type: none"> <li>• Business Plan Development</li> <li>• Business Writing</li> <li>• Project Management</li> <li>• QMS ISO 9001 Courses</li> <li>• Time Management</li> </ul>	<ul style="list-style-type: none"> <li>• Lean Six Sigma               <ul style="list-style-type: none"> <li>◦ Blue Belt</li> <li>◦ Yellow Belt</li> <li>◦ Green Belt</li> </ul> </li> <li>• Critical Thinking</li> </ul>	<ul style="list-style-type: none"> <li>• 3 Rs of Service</li> <li>• Emerging Leaders Program</li> </ul>

For more information about BIG Academy, contact CPE via email at [CPE@dallascityhall.com](mailto:CPE@dallascityhall.com)  
 To register for training classes, go to Lawson (HRIS).  
 Connect with CPE on LinkedIn.

**DALLAS** Center for Performance Excellence  
*Setting New Standards for Local Government*



# Co-hosted First Regional Innovation Forum

The Next Big Things

Held Friday, October 23, 2015

Dallas Latino Cultural Center



Identified **44 trends in four categories** that could impact how local governments operate in the next generation

- Resources
- Technology
- Demographics
- Governance

Click here for more info.:

[http://transformgov.org/en/knowledge\\_network/documents/kn/document/307623/the\\_next\\_big\\_things](http://transformgov.org/en/knowledge_network/documents/kn/document/307623/the_next_big_things)



A Center for Performance Excellence **Strategic Partner**



## National Lean Six Sigma Consortium

The Dallas CPE is leading an effort to form a national consortium of cities that currently use **Lean Six Sigma** as a process improvement tool

Consortium will allow for the exchange of:

- **Strategies for deployment**
- **Ideas for project identification**
- **Opportunities for most successful projects**





# Monitoring Our Progress

# Implementation Milestones

• Completed organizational shifts to establish new CPE	October, 2014
• Convene Working Group monthly and developed CPE program of work and calendar	December, 2014
• Implemented organization-wide business planning at the department level which included key performance metrics and objectives/tactics for achieving Baldrige criteria	April, 2015
• Launched new Lean Six Sigma program	May, 2015
• Appointed CPE Advisory Board	September, 2015
• Conducted First Lean Six Sigma report out	October, 2015
• Co-hosted regional innovation forum	October, 2015
• Launched Dallas Data Points dashboard	October, 2015
• Established BIG Academy	October, 2015
• Re-engineered deployment of ISO 9001	November, 2015
• Began review of departmental business plans	November, 2015

# What's Next?

Actions	Time Frame
<ul style="list-style-type: none"> <li>Conduct Quarterly Lean Six Sigma Report Out</li> </ul>	<p><b>January, 2016</b></p>
<ul style="list-style-type: none"> <li>Complete Business Plan Feedback and Scoring</li> </ul>	<p><b>January, 2016</b></p>
<ul style="list-style-type: none"> <li>Convene Advisory Board Meeting</li> </ul>	<p><b>January, 2016</b></p>
<ul style="list-style-type: none"> <li>Present Business Survey Results at City Council Retreat</li> </ul>	<p><b>February, 2016</b></p>
<ul style="list-style-type: none"> <li>Begin Green Belt Wave 3 Training</li> </ul>	<p><b>February, 2016</b></p>
<ul style="list-style-type: none"> <li>Accept Applications for Wave 4 Green Belt Training</li> </ul>	<p><b>March, 2016</b></p>
<ul style="list-style-type: none"> <li>Brief CPE Quarterly Memo to Council BF&amp;A Committee</li> </ul>	<p><b>April, 2016</b></p>
<ul style="list-style-type: none"> <li>Co-Host Innovation Lab with Alliance for Innovation</li> </ul>	<p><b>April, 2016</b></p>
<ul style="list-style-type: none"> <li>Conduct Quarterly Lean Six Sigma Report Out</li> </ul>	<p><b>April, 2016</b></p>
<ul style="list-style-type: none"> <li>Conduct Community Survey</li> </ul>	<p><b>Summer, 2016</b></p>
<ul style="list-style-type: none"> <li>Conduct Quarterly Lean Six Sigma Report Out</li> </ul>	<p><b>June, 2016</b></p>
<ul style="list-style-type: none"> <li>Brief CPE Quarterly Memo to Council BF&amp;A Committee</li> </ul>	<p><b>June, 2016</b></p>
<ul style="list-style-type: none"> <li>Brief CPE End of Year Results to Council</li> </ul>	<p><b>October, 2016</b></p>

# Tools for Monitoring

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- **Use of metric dashboards**
  - Lean Six Sigma, Dallas Data Points
- **Quarterly/annual reporting**
  - Lean Six Sigma project report outs, CPE quarterly newsletters, annual briefings
- **Business planning reviews & scoring**
  - Using Quality Texas/Baldrige criteria
- **Citizen, business, & customer survey results**





# Questions & Comments

# Appendix

# Who We Are

# A Fresh Approach

Building on past and current successes by:

- Fostering **synergy through collaboration**, rather than segmented or siloes of internal efforts
- Infusing **new thoughts and ideas** borrowed from private business and industry
- “Daylighting” and sharing of **innovations and best practices** via use of a public-private advisory board



# CPE Advisory Board

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- Comprised of nine **leaders in business, industry, academia, and non-profits**
- Meets twice annually to share **ideas for innovation and best practices** from private sector, academia and other municipalities
- May participate individually as a **Strategic Partner**, providing advice on “flagship” improvement initiatives (like Lean Six Sigma, Baldrige, ISO and training)

# Newly Appointed Advisory Board

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- **Dr. Domonic Bearfield**, Associate Professor, Texas A&M University
- **Samantha Dwinell**, Vice President, Human Resources, Texas Instruments
- **Ken Fenoglio**, Vice President, AT&T University, AT&T, Inc.
- **Ginger Hardage**, Senior Vice President, Culture & Communications, Southwest Airlines Co.
- **Michael Lunceford**, Senior Vice President, Mary Kay Inc.
- **Randy O'Neal**, Vice President, Production Operations, Lockheed Missile
- **Randall Reid**, Director, ICMA Analytics, International City/County Management Association
- **Karen Thoreson**, President/CEO, Alliance for Innovation
- **Dr. Alberto Yanez-Moreno**, Advisor, TMAC, University of Texas at Arlington

# Lean Six Sigma

# Lean Six Sigma: What is it?

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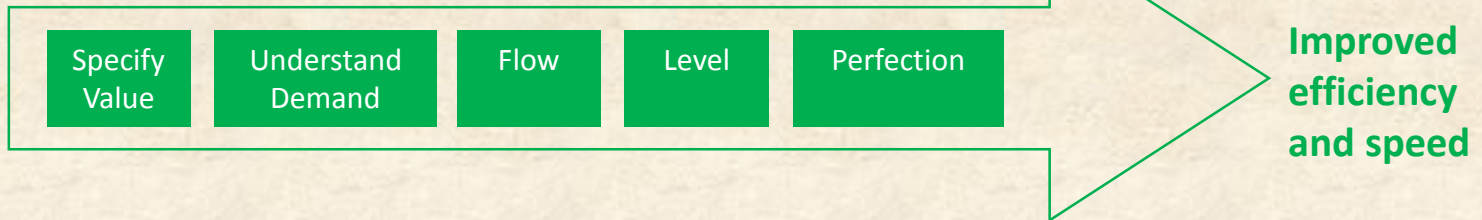
A combination of **two disciplined, data-driven approaches** and methodologies for improving performance:

- **Lean Enterprise:**  
Developed by Toyota Motor Company as the Toyota Production System in the 1950's
- **Six Sigma:**  
Developed by Motorola in the 1980's

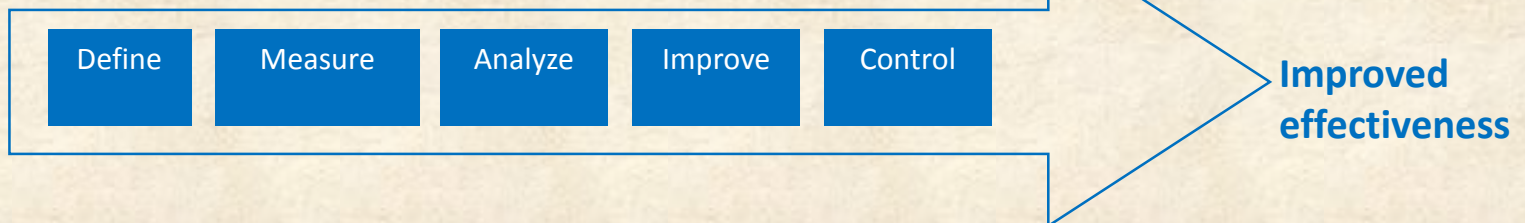


# Focus Comparison

**Lean** – focuses on dramatically improving flow in the value stream and eliminating waste



**Six Sigma** – focuses on eliminating undesired results and reducing variation in processes



# Lean Six Sigma Methodology

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The methodology for all continuous improvement is **DMAIC**:

## STEPS

1. **Define** – identify the opportunity for improvement
2. **Measure** – measure the capability of the process and identify factors
3. **Analyze** – evaluate the factors to identify the root cause of waste and variation
4. **Improve** – identify and implement improvements
5. **Control** – implement controls for sustainment

# Process Comparison

Steps	Lean Process	Six Sigma Process
<b>Step 1</b>	Current State Assessment (Value Stream Map)	Define Opportunities – identify, quantify, and prioritize improve opportunities
<b>Step 2</b>	Future State Map (Value Stream projections after Waste Reduction Kaizens)	Measure approved opportunities – current state measurements
<b>Step 3</b>	Identify, quantify, and prioritize process improvement opportunities	Analyze – scenarios, what-ifs, design of experiments leading to an outcome result
<b>Step 4</b>	Kaizen – implement the change and re-measure	Improve – implement the solution and re-measure
<b>Step 5</b>	Audits to sustain the gains	Control – develop control system to sustain the change

# Eight Areas of Waste



## Defects

Efforts caused by rework, scrap, and incorrect information.



## Overproduction

Production that is more than needed or before it is needed.



## Waiting

Wasted time waiting for the next step in a process.



## Non-Utilized Talent

Underutilizing people's talents, skills, & knowledge.



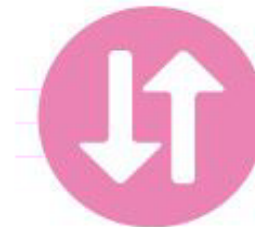
## Transportation

Unnecessary movements of products & materials.



## Inventory

Excess products and materials not being processed.



## Motion

Unnecessary movements by people (e.g., walking).

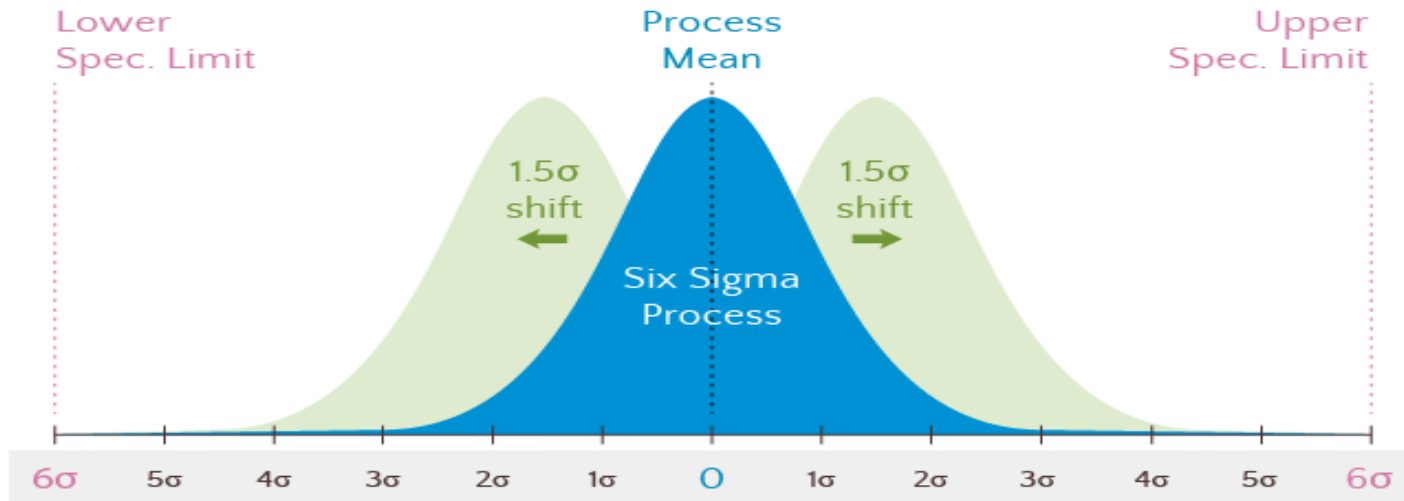


## Extra-Processing

More work or higher quality than is required by the customer.



# Six Sigma: Statistically Visualized



The term "Six Sigma" is based on a statistical concept: defective items can be minimized by maintaining 6 standard deviations (6 "sigmas") between the **process mean** (average) and its **upper and lower specification limits**.

Six Sigma also accounts for the tendency of processes to degrade over the long term: A Six Sigma process can tolerate a "shift" of 1.5 standard deviations (1.5σ shift) and still maintain a "safety cushion" between the process mean and its specification limits.


Source:

# Achieving Six Sigma

A statistical representation

Sigma Level	DPMO*	% Defective	% Yield
1	691,462	69%	31%
2	308,538	31%	69%
3	66,807	6.7%	93.3%
4	6,210	.62%	99.38%
5	233	.023%	99.977%
6	3.4	.00034%	99.99966%

*In other words,  
a measure of  
quality that  
strives for near  
zero defects.*



*\*Defects per million opportunities*



# Important Program Considerations

- Participants need to **work in their own areas** so projects are considered part of their current job
- Senior **managers must actively steer**, while **participants push for progress** from organizational layers
- The **optimum ratio of Green Belts to Black Belts** is critical to mentoring and successful project completion
- The **indirect benefits are even greater** than the direct benefits



# Training and Certification Progression



## Blue Belt

- ongoing training opportunities every other month

## Yellow Belt (NEW)

- ongoing employee suggestion "styled" open training opportunities every other month

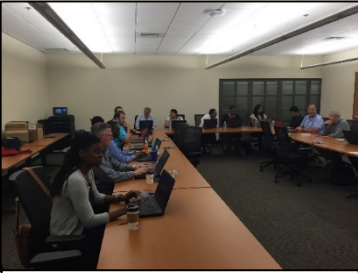
## Green Belt

- competitive application process, twice per year for classes of 25 each (candidates recently selected for third class)

# Current Green Belts

## Green Belt – Class#1

Department	Name	Gender	Race*
311	Beverly Moore	Female	BLK
Aviation	David Flaishans	Male	WHT
City Att	Jorge Sintes	Male	PUER
Civil Serv	Mildred Laird	Female	WHT
Code	Brentnie Brown	Female	BLK
Code	Phyllis Goode	Female	BLK
Code	Robert Curry	Male	WHT
Court	Claudia Chavez	Female	MEXA
Court	Ron Everett	Male	WHT
DFR	Norman Seals	Male	WHT
DPD	Joli Robinson	Female	BLK
DPD	Shanika Mayo	Female	BLK
DPD	Wendy Nalls	Female	BLK
DPD	Zena Young	Female	MEXA
DWU	Bobby Burkes	Male	WHT
DWU	Jeff Hadaway	Male	WHT
DWU	Timothy Whaling	Male	WHT
DWU	Tony Rader	Male	WHT
Em. Mgt	Bridgette Smith	Female	BLK
Equipment	Tommy Ludwig	Male	WHT
Parks	Mike Tiegreen	Male	WHT
Streets	Josephine Marroquin	Female	MEXA
Streets	Tina Richardson	Female	BLK
CIS	Daniel Pollak	Male	WHT



1<sup>st</sup> Wave of Green Belts



2<sup>nd</sup> Wave Training



Brainstorming Improvement Ideas

## Green Belt – Class #2

Department	Name	Gender	Race*
DWU	Alexander Land	Male	WHT
SDC	Ali Hatefi	Male	OTHER
DWU	Art Torres	Male	MEXA
EBS	Arthur Grothe	Male	WHT
OEQ	Brian Carter	Male	WHT
PWO	Candi Chamber	Female	BLK
311	Cory Burns	Male	BLK
SDC	David Lam	Male	CHIN
Parks	Denyse Cole	Female	BLK
DFR	Dwight Freeman	Male	BLK
Mayor/City	Elizabeth Pazar	Female	WHT
TWM	Gehan Asaad	Female	OTHER
Parks	Hazel Roper	Female	BLK
STS	Helena Thompson	Female	WHT
PWO	Idalia Soria	Female	MEXA
Finance	Jack Ireland	Male	WHT
STS	Jefferson Andrews	Male	WHT
OEQ	Kevin Overton	Male	WHT
OEQ	Lisa Fullerton	Female	WHT
311	Margarita Carrasco	Female	SPAN
EBS	Melanie Lamb	Female	WHT
DWU	Paul McGregor	Male	BLK
SAN	Rachel Escanlar	Female	SPAN
SAN	Rick White	Male	WHT
DWU	Tamara Royal	Female	BLK
SAN	Thomas Greene	Male	BLK
TWM	Vincent Tenorio	Male	OTHER
HR	Virgina Haralson	Female	BLK
DFR	Wanda Moreland	Female	BLK

\*Source: self reported information from personnel file.


# Business Planning



# Department Business Plans

**Enter Department Name**

**SAMPLE IMAGES**



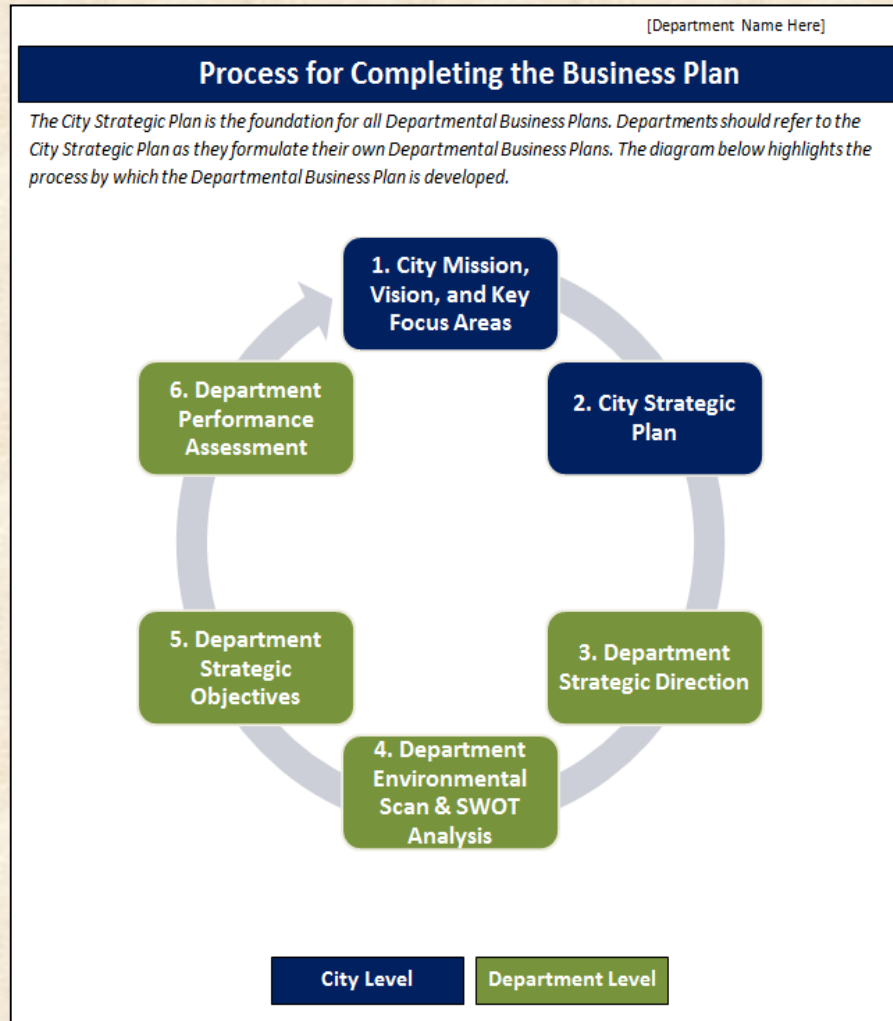
**Department Business Plan &  
Performance Excellence Assessment**

Director | DIRECTOR NAME  
Published | MONTH/YEAR

**Department Strategic Direction**  
[Enter Department Strategic Direction here]



# Business Plan Cycle



## City Level

- Mission, Vision and Key Focus Areas
- Strategic Plan

## Department Level

- Strategic Direction
- Environmental Scan and SWOT Analysis
- Strategic Objectives
- Performance Assessment

# Business Planning

The **Key Focus Areas** reflect the City's established priorities: *Public Safety; Economic Vibrancy; Clean, Healthy Environment; Culture, Arts, Recreation and Education; E-Gov*

The **Goals** are to *Build – Innovate – Give* and make **BIG** things happen! Each goal also incorporates the City's Core Values:  
**B** – Accountability, Commitment, Leadership, Teamwork  
**I** – Innovation  
**G** – Customer Service, Environmental Stewardship, Integrity, Sensitivity



The **Mission** is the overarching statement of City of Dallas: *To enhance the vitality and quality of life for all in the Dallas Community.*

The **resource engine** is an actively engaged workforce.

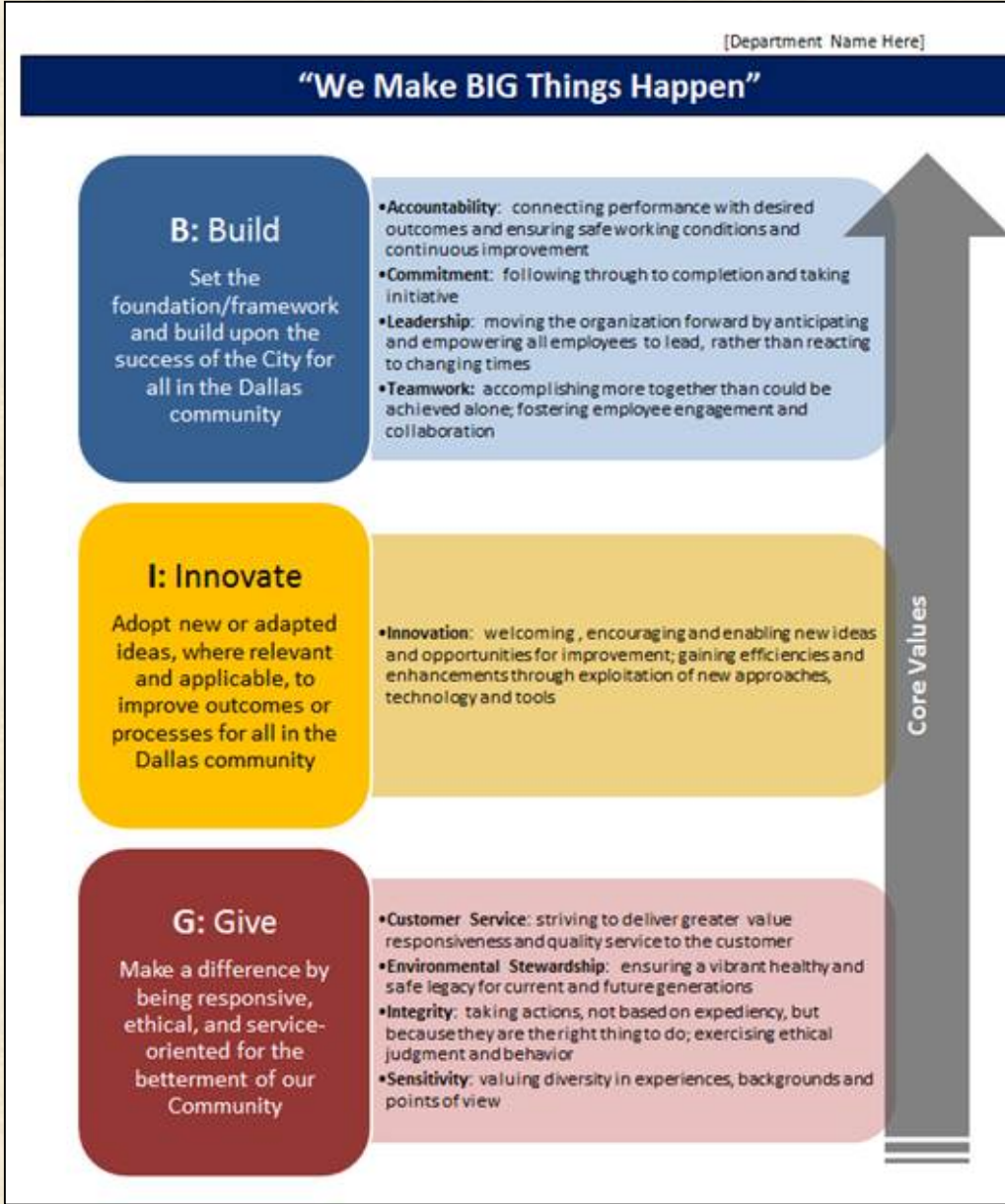
The **Strategic Plan** provides a blueprint for accomplishing citywide goals.

The **Baldrige Framework** represents seven critical areas in *Leadership, Strategy, Customers Measurement, Analysis and Knowledge Management, Workforce, Operations, and Results*

The **Center for Performance Excellence (CPE) Tools** are Culture, Systems and People (CuSP).

# Part I: Departmental Strategic Objectives

- Strategic Plan Alignment
- Department SWOT Analysis
- Action Plan | Build
- Action Plan | Innovate
- Action Plan | Give



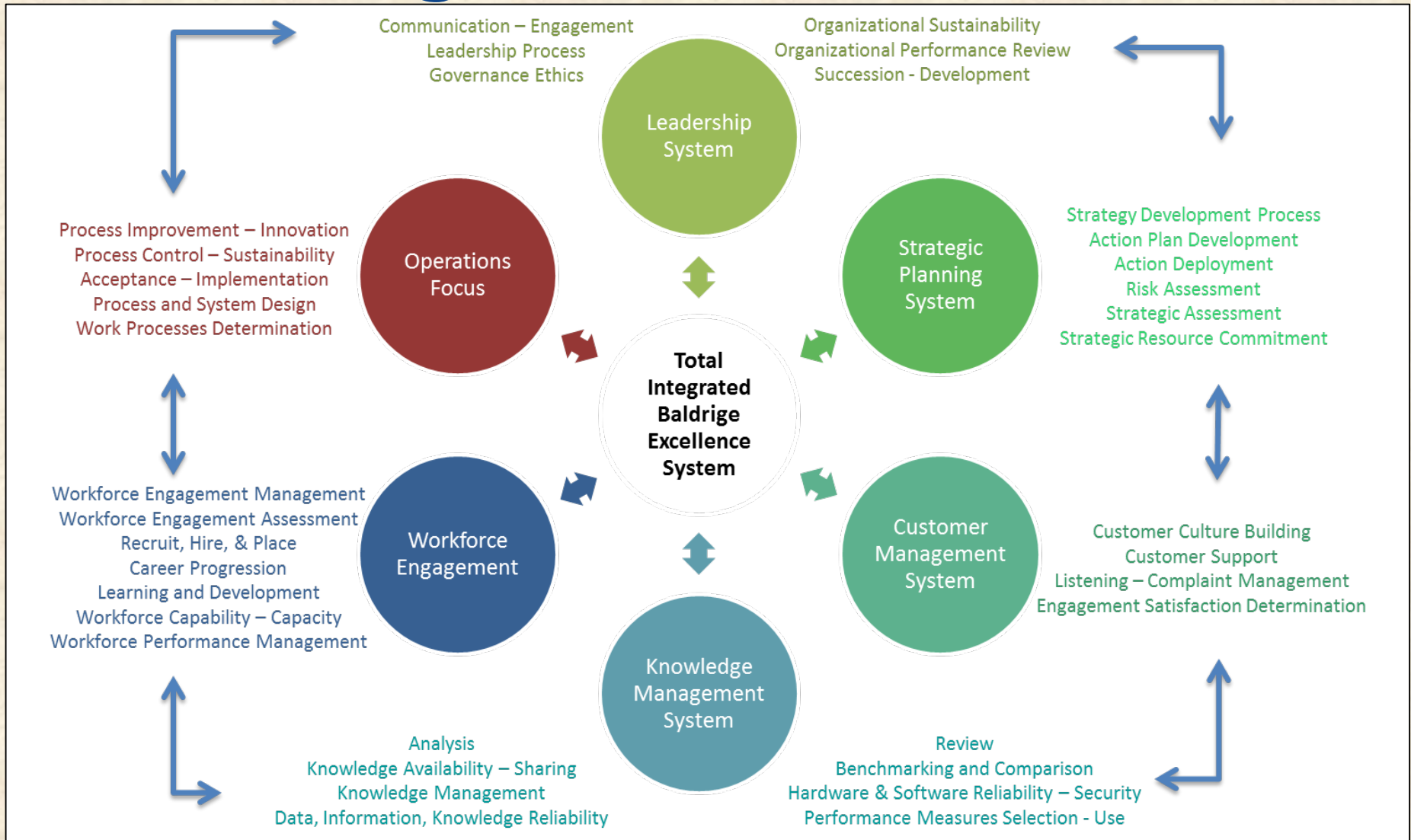
# Part II: Departmental Performance Assessment

## Baldrige Criteria

- Criteria 1** | Leadership (120 points)
- Criteria 2** | Strategy (85 points)
- Criteria 3** | Customer (85 points)
- Criteria 4** | Measurement, Analysis,  
& Knowledge  
Management  
(90 points)
- Criteria 5** | Workforce (85 points)
- Criteria 6** | Operations (85 points)
- Criteria 7** | Results (450 points)



# The Baldrige Criteria



# Strategic Planning

# Annual Strategic Planning Process

## October

- CPE shares preliminary end of year information with PIO
- Departments submit Departmental Business Plans with end of year updates for completed fiscal year

## November

- Departments provide and confirm objectives, strategies and work plan items for current fiscal year

## December

- CPE presents end of year updates for completed fiscal year to Council
- Council confirms activities objectives, strategies and work plan items for current fiscal year

## January

- CPE provides coaching/mentorship to departments based on Departmental Business Plan reviews

# Annual Strategic Planning Process (Continued)

## April

- Departments submit mid-year Departmental Business Plans with year to date updates

## July

- Departments review year to date performance data
- Departments review and select additional measures and targets based on budget
- CPE reviews and edits proposed budget pages

## August

- CPE provides coaching/mentorship to departments based on Departmental Business Plan reviews

## September

- Departments prepare Departmental Business Plans for end of year submission
- Council adopts proposed budget



# Quality Management Systems (ISO9001)

# Implementation Status

Department	9001	Registration Date (9001)	14001	Registration Date (14001)	18001	Registration Date (18001)
AVI	✓	May-13	✓	Jun-08	P	
CVS Test Development & Validation	I					
CCS	✓	Dec-09	✓	Jun-08	✓	Nov-12
CIS Radio Shop	P		✓	Jun-08	P	
CES	✓	Nov-14	✓	Jun-08	✓	Dec-08
CTS	✓	Dec-08	✓	Jun-08	✓	Dec-08
BDPS	✓	May-10	NP		NP	
DFD	NP		✓	Jun-08	NP	
DPD	NP		✓	Jun-08	NP	
DWU	✓	Apr-12	✓	Jun-08	✓	Apr-12

# Implementation Status

## (Continued)

Department	9001	Registration Date (9001)	14001	Registration Date (14001)	18001	Registration Date (18001)
EBS	✓	Apr-08	✓	Jun-08	✓	Apr-09
HR/PER	✓	Apr-12	NP		NP	
HR Employee Relations	I					
LIB	✓	Dec-09	NP		✓	Jan-13
ORM	I		NP		NP	
PBW	I		✓	Jun-08	P	
PRK	P		✓	Jun-08	P	
SAN-Landfill	✓	Oct-10	✓	Jun-08	P	
STS	✓	Apr-07	✓	Jun-08	✓	Mar-14
SDC	P		NP		NP	
TWM	I		I		P	
TWM-Flood Control	✓	Jan-13	✓	Jun-08	P	

# The new ISO 9001:2015 Standard

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- The **context of the organization** now needs to be defined
  - Who are we?
  - What do we do?
  - Where are we going?
- Requirement to identify and control **risks and opportunities**
- Requirement to identify, prioritize and integrate the **needs of interested parties** into the organization's processes
- Increase the **linkage** between ISO 9001 activities, bottom line business activities and the strategic direction of the organization
- Increase emphasis on the **process approach**
- Increase requirements for **top management commitment** and involvement



# Complementing ISO w/Lean Six Sigma

Attribute	ISO	Lean Six Sigma
<b>Scope</b>	System approach	Focused process improvement
<b>Goal</b>	Continual improvement of the entire operational system	Provide the tool set and structured framework for continuous improvement (CI)
<b>Engagement of Executive Management</b>	Formal, periodic management review is required	Necessary for long-term success
<b>Verification</b>	The adequacy and effectiveness of the system is verified via formal internal and external audits	Verification and sustainment of improvements occurs in the Control phase
<b>Process Improvement Method</b>	The method of process improvement is left to the user to develop; a flawed process could be captured and recorded into the system	Well-defined toolbox for process improvement structured to follow DMAIC phases: Define, Measure, Analyze, Improve, & Control
<b>Staff Training &amp; Development</b>	Implementers are trained initially. Then, ISO requires system-wide training needs analysis and formal training program	Implementers are trained as Green Belts and Black Belts. These individuals will provide the CI expertise to facilitate and support teams during process improvement projects. Blue Belt training is taught to the general employee population to raise awareness across the organization

# Sunset Review

# CPE's Role in Sunset Reviews

- Serve as review team members
- Act as subject matter experts
- Provide SWOT analysis
- Research industry leading performance measures
- Review stakeholders based on customer service needs
- Research best practices and benchmarking
- Ensure integration with business plans
- Seek process improvement opportunities

# Sunset Review Timeline

FY 16	FY 17	FY 18	FY 19
Fire	Convention Center	Mayor and City Council	Aviation
Equipment	Cultural Affairs & WRR	City Auditor	Economic Development
Public Works	Library	City Manager	Housing
Street Services	Park and Recreation	City Secretary	Fair Housing
Trinity Watershed and Storm Water	Civil Service	City Controller	Planning and Neighborhood Vitality
Environmental Quality	Human Resources	Communication and Information Services	Sustainable Development and Construction
Sanitation	Employee Benefits	Financial Services	
Water Utilities	Risk Management	Purchasing	
		Public Information	
		Intergovernmental Services	