# PROCESS IMPROVEMENT FOR HIGH PERFORMANCE

**LEADERSHIP ICMA**

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# Contents

## EXECUTIVE SUMMARY

Local governments across the United States are committed to good stewardship of taxpayer investments through the effective and efficient delivery of community services. The City of Twin Falls, Idaho shares this commitment, as evidenced by the City's goal to be the most livable city in Idaho and its motto of "People Serving People".
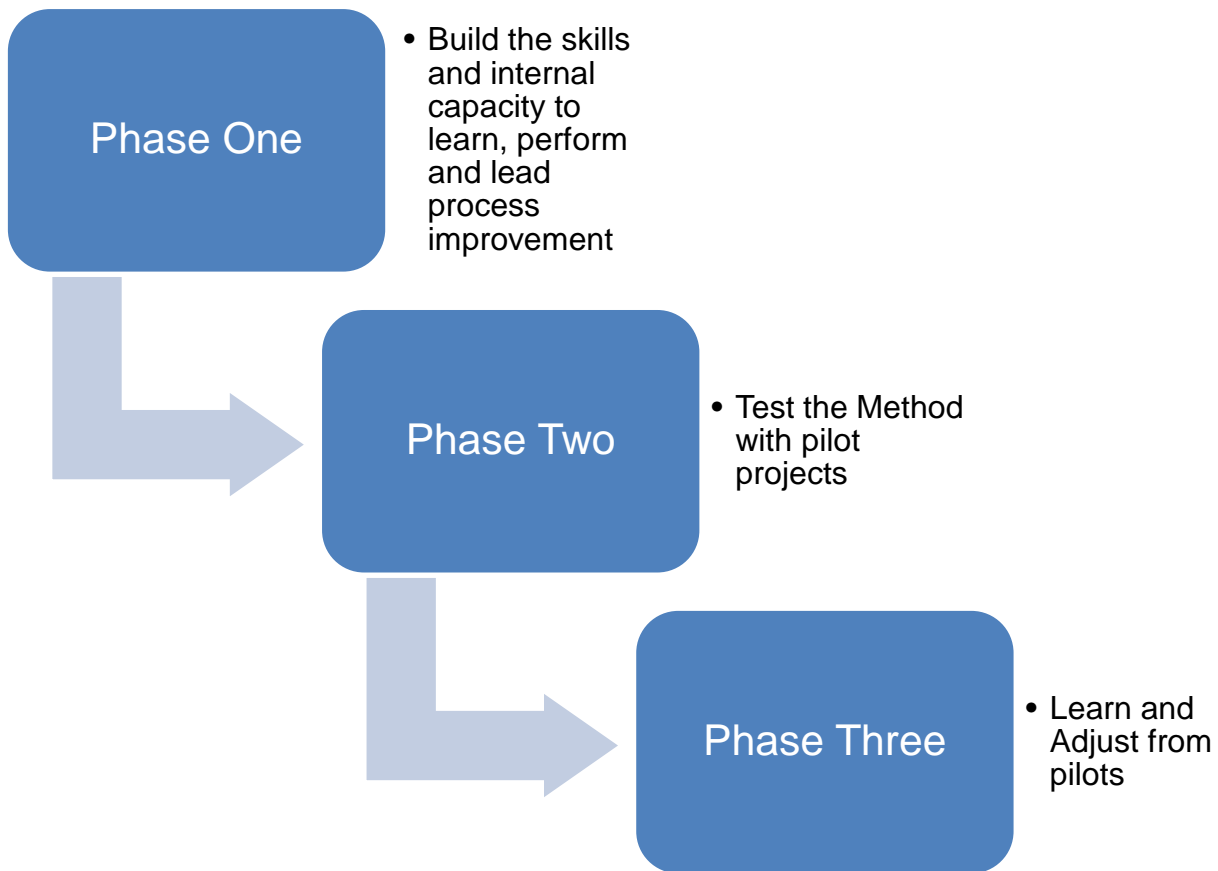
In response to increasing demands on municipal services from a growing population, the City of Twin Falls seeks to implement an organization-wide Process Improvement program to better manage capacity and to deliver higher quality services. The City Manager of Twin Falls submitted a project request to the Leadership ICMA (LICMA) Class of 2019 to assist in the development of such a program. The project deliverable, *Process Improvement for High Performance*, includes an operational assessment of the organization, a review of leading practices in local government Process Improvement efforts, and suggests program implementation strategies for the organization.

The focus group interviews conducted during the two-day site visit in March 2019 revealed that the employees of the City of Twin Falls are dedicated public servants who are genuinely committed to the wise use of tax dollars. Many Twin Falls employees are openly interested in learning about Process Improvement, especially as it relates to capacity management. The employees understand that acquiring new skills, such as those provided though Process Improvement training, will equip the Twin Falls workforce with the tools needed to meet current and future service demands without expanding resources.

The review of leading practices provided in this report identifies several methodologies local governments are using for Process Improvement. Building upon the success of the City of Twin Falls' *One City* leadership philosophy, the LICMA project team recommends the development of a parallel team within the Twin Falls organizational structure to lead city-wide Process Improvement efforts. This is a cost-effective strategy that will build individual employee facilitation, project management, and process improvement skills while streamlining processes across the organization.

The LICMA team suggests that the City of Twin Falls adopt a three-phase approach to Process Improvement:

1) BUILD the SKILLS: To build a foundation for success, the City must first develop internal capacity to learn process improvement, to perform process improvement, and to lead initiatives across the organization.

2) TEST the METHOD: Staff must test the structure and chosen process improvement methodology by conducting several pilot projects. Smaller, less complex projects are appropriate at this phase, as generating small wins early will develop support and momentum for the Process Improvement team.

3) LEARN and ADJUST: Measure the outcomes of the pilot projects through quantitative and/or qualitative data collection. Learn from these efforts and adjust the approach; this will be an iterative process the City should repeat with each round of process improvements.

**Phase One**
- Build the skills and internal capacity to learn, perform and lead process improvement

**Phase Two**
- Test the Method with pilot projects

**Phase Three**
- Learn and Adjust from pilots

## PROJECT BACKGROUND

The City of Twin Falls is uniquely positioned in the picturesque landscape of Idaho's Magic Valley and is the center for business, education, and recreation opportunities in the region. Unlike many communities its size, Twin Falls serves a Metropolitan Statistical Area (MSA) population three times larger than the population inside its incorporated boundaries. The growing demand for municipal services, coupled with Idaho's Dillon Rule revenue limitations, is forcing the City to explore ways to operate more efficiently.

The Twin Falls management team has requested a review of leading practices related to process improvement and is seeking recommendations for an organization-wide program to enhance the delivery of municipal services. These efforts are in concert with the organization's overall *One City* leadership philosophy. The employees of Twin Falls have collectively developed and operationalized a vision statement, organizational values, and a leadership philosophy that lay the foundation for implementing a process improvement program.

The City of Twin Falls' utilizes a hybrid organizational structure that combines elements of a traditional hierarchy with those of matrix and team-based systems.  Specifically, Twin Falls is implementing the Weldon Cooper Center for Public Service High Performance Organization (HPO) design model that facilitates consultative, collaborative organizational systems.

The City's strategic plan was updated in 2018 and guides the budgetary and policy making decisions for the organization through the establishment of strategic goals. Of particular importance and relevance to process improvement is Focus Area 8 "Internal Organization" within the plan. The primary goal of Focus Area 8 is to "Provide effective, professional, high quality services to City residents, businesses, industries, and visitors". As indicated by initiative IO.1.4.3, Twin Falls is committed to "Establish, educate, and expand process review efforts to enhance efficiencies and effectiveness".

Twin Falls has penned a *One City* leadership philosophy and created collaborative, parallel teams to empower decision making at all levels of the organization. The 2018 update of the City's strategic plan was a crucial first step in achieving the systems and structures improvement components of HPO. Process improvement is the next logical step toward achieving the community's goals more efficiently.

## WHAT IS PROCESS IMPROVEMENT?

Process improvement is the deliberate act of improving an existing process. It can be thought of as an iterative approach to better deliver the organization's desired results. When implemented successfully, the results can be measured in the enhancement of product quality, customer satisfaction, customer loyalty, increased productivity, safety, efficiency, or the development of the employee skills.

At the core of process improvement is the process itself. A process is a set of linked tasks that consume resources and converts inputs to achieve the desired outputs.[1] A process has a defined beginning and end, as well as a specified order to complete the tasks. Processes exist within nearly every function of an organization from how to answer a phone call to how to procure professional services.

Several process improvement methodologies exist, but two of the most widely adopted methodologies are Lean and Six Sigma. Lean grew out of the Toyota Motor Corporation's Toyota Production System that uses the underlying philosophy of creating value by eliminating waste within all aspects of the processes[2]. Six Sigma uses a data-driven and defined process called DMAIC: define, measure, analyze, improve, control.[3] Six Sigma offers levels of certification that demonstrate increased proficiency within the Six Sigma methodology.

Within the various process improvement methodologies, there are also varying levels of investment and effort. Lean tools can be most helpful for small process issues within a value stream with boundaries on resources and/or time and for repetitive issue resolution. These tools are not appropriate for strategy level or non-repetitive issue resolution. This is a key distinction in order to avoid the "silver bullet trap", or the belief that a single methodology (Lean or Six Sigma, Kaizens, Theory of Constraints, etc.) can be used to address all issues an organization faces[4].

Regardless of the methodology, there are several common steps within a process improvement framework that may be used without specific training or certification. The following steps (see Figure 1) are adapted from Tristan Boutros and Jennifer Cardella's *The Basics of Process of Improvement* and Eduardo Perez's *Simplified Process Improvement*:

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[1] Basics of Process Improvement.  By Tristen Boutros and Jennifer Cardella, 2016

[2] The Collective Potential A Holistic Approach to Managing Information Flow in Collaborative Design and Construction Environments. By Andreas Phelps, 2012

[3] https://www.6sigma.us/six-sigma.php

[4] Building High Performance Government through Lean Six Sigma. By Mark Price, 2011.

**Define Problem**

Establish what is driving the need for the process change.

**Collect Data**

Understand current the process and establish a baseline through existing software systems and field observations. Use process mapping to visualize the process.

**Analyze**

Use data collected in the previous step to identify trends and roadblocks within the process.

**Plan**

Create a plan to modify the process, create a scope, identify the resources needed to make the process improvements, and establish a schedule.

**Implement**

Implement the plan, communicate changes to impacted stakeholders, collect data and compare against baseline to determine if the modifications improved the process.
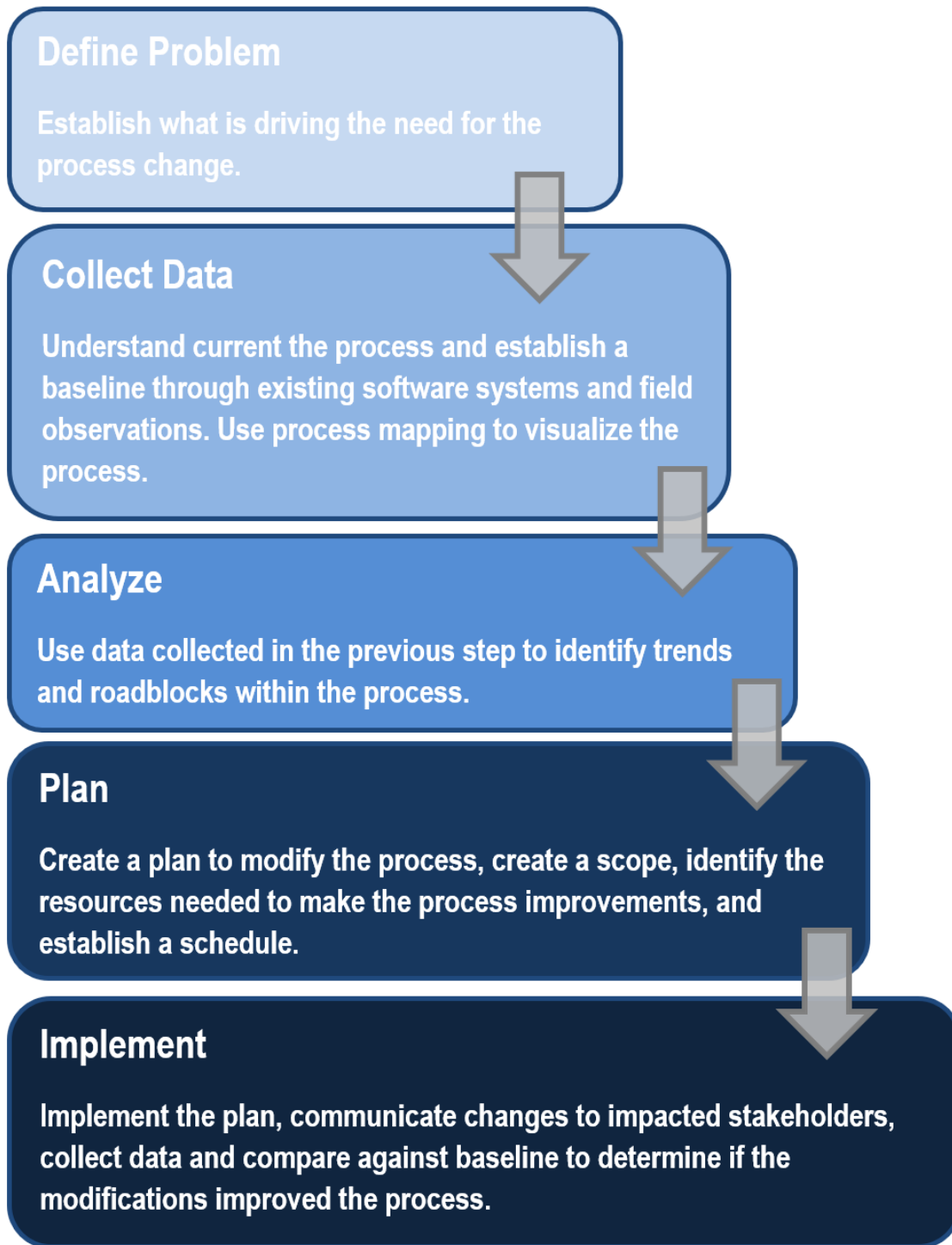
*Figure 1: Basic Steps for Process Improvement*

## LEADING PRACTICES

In addition to reviewing literature related to process improvement, the team conducted a scan of implementation strategies in local government. The scan revealed three general methods local governments employ to drive process improvement efforts in their organizations. A common theme among the various methodologies is that organizations leading process improvement work are data-driven and have established performance measures against which service delivery is evaluated. The scan of leading practices indicate that Twin Falls would benefit from identifying performance measures in line with the common business adage "What gets measured gets done".

In process improvement, data is collected to benchmark current performance, to measure the degree of improvement, to control the new processes, and to set future goals. Common outputs measured are:

- Average number of customers in a system or waiting the queue
- Average time taken by customers either in the system or in line
- Percentage of capacity used or system utilization
- The probability of a new arrival having to wait
- The implied cost for a given capacity and its waiting queue

One example of a strong performance management program is Cincinnati, Ohio's "Results Cincy" program, a robust and useful tool used for communicating how the organization is doing with day-to-day work. The program's intent is simply, "...to make government data simple to use, easy to understand, and effortless to access. No data or tech knowledge is required!"[5]

Similar to Twin Falls, Cincinnati became interested in the more efficient delivery of services and created a function within their local government to accomplish that goal. In October 2014, the Cincinnati City Council appropriated funding for the creation of the Office of Performance and Data Analytics. In November, the (Cincinnati) City Manager hired its first Chief Performance Officer to lead the Office.

> Cost: The Cincinnati, Ohio Office of Performance and Data Analytics is housed within the City Manager's Office and has an annual budget of $817,990 as of Fiscal Year 2019. This includes a staff of six (6.0) full time equivalent employees.

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[5] https://insights.cincinnati-oh.gov/stories/s/Cincinnati-INsights/s59x-yqy3

Benefits: The major benefit of a full-fledged performance office is a centralized "clearinghouse" for all data-driven hypotheses or theories to be implemented into actual decisions, policies, or programs. It can lead to more clarity of expectation from central management, and also provides uniformity in resources and processes for data-driven, performance-based programs.

Challenges: In a 2016 ICMA survey, over half of respondents indicated that they do not currently track performance measures, with the most common reason being lack of capacity to collect and/or analyze data.[6] Thus, the primary challenge in the creation of a performance office is resources. A best-case scenario would be for a given city to have an employee (or employees) fully dedicated to managing a performance office. When these efforts are added to a current employee's role, or group of employees, the initiative may suffer in quality.

Establishing performance measures will facilitate the evaluation of process improvement efforts and will aid in prioritizing potential projects. Process improvement projects that have an impact on key indicators would be prioritized and supported before others. Baseline data is required for any process improvement. The development of performance measures and the cultivation of a data-driven culture will bolster process improvement efforts. Finally, performance measures will also support budget development, enabling the ability to link budget allocation and requests to priority performance indicators.

Local governments are implementing process improvement in a variety of ways. Three leading practices are outlined below.

## Innovation Offices

In this structure, an organization charges an employee or team with leading innovation, such as process improvement, across the organization. This position or team lives in various divisions or departments; however, it is most often a direct-report position under the City Manager or Information Technology (IT) Director.

- San Francisco's *Office of Civic Innovation*
Launched in 2012, the Mayor's Office of Civic Innovation's mission is to "support City Departments by introducing new approaches, resources, and technology for Mayoral priorities". Past projects include supporting innovators by providing real-world demonstration opportunities through the Living Innovation Zones, providing easier access to the laws of San Francisco in technologist-friendly formats, and completing a Digital

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[6] https://icma.org/sites/default/files/309068_ICMA%20Innovation%20Survey%20Summary%20Report.pdf

Services Strategy to rebuild the City's website from the ground up and using agile approaches to re-think public service design.

Cost: Director-level salary (1 FTE Innovation Officer) based upon team make-up.

Benefits:  Professionals skilled in leading innovation bring subject matter expertise to the organization on many fronts, including process improvement.

Challenges: This methodology is costly and may not be an option in communities with constrained budgets. If an organization is silo-ed and/or decentralized, cross-departmental staff may find it difficult to follow direction from a single employee, especially an employee from outside their respective home department(s). As this position focuses on overall innovation for an organization, process improvement may not be an emphasis and could be lost in other innovation strategies.

## Process Improvement Offices

This structure employs a team with leading Process Improvement across the organization. The team can live in various divisions, but most often reports to the City Manager or Chief Financial Officer.

- City and County of Denver Colorado, *Peak Academy*

Perhaps the most visible and successful Process Improvement initiative in local government is the City and County of Denver, Colorado's *Peak Academy*. Peak trains and coaches employees at all levels to improve the way government works. Denver's vision is to change the way government operates to improve customer experience. Launched by Mayor Michael Hancock in 2011, the Peak Academy website now includes a dashboard where the City shares its success over time, showing actualized savings above $34M to date and how over 4,000 employees have been trained.

Cost: While all process improvements are guided to not include requests for additional funding, the program itself employs 8 FTE's and costs just under $1M, annually.

Benefits: Proven in effectiveness due to concentrated skill, this methodology's utilization of best practices and skilled professionals delivers results.

Challenges: Similar to staffing an innovation office, this structure is costly. In Denver it has generated savings that provide a significant return on investment; however, it may be challenging to establish a similar structure on a constrained budget.

A benefit of Denver's success is that it now reserves two seats per Black Belt training for non-City/County of Denver employees and can also be contracted by organizations to deliver the training on-site. The City of South Bend, Indiana brought in Peak staff to train their team and the South Bend Academy is now a part of their organization in the Department of Innovation and Technology.

## Parallel Structure

Common in smaller organizations, within this structure an organization trains one or more employees to lead process improvement trainings and process review. With this structure, there is not a dedicated office operating within the hierarchy to deliver process improvement. Instead, employees from across the organization are trained in process improvement and are empowered to lead and support the efforts. This team approach can be led by one employee reporting to the City Manager, Information Technology Director or Chief Finance Officer.

- City of Aspen, CO: Senior Process Improvement Analyst

The city of Aspen is recruiting a position to serve as a principal resource for the organization, "using tools such as design thinking, LEAN Six Sigma, quality principles and policy analysis to guide departments towards organizational excellence" (see Appendix A for job description). In this structure, Aspen hopes to streamline and deepen process improvement efforts. Also see Appendix B for a similar position with the City of Chesapeake, VA.

- City of Fort Worth, TX: Lean Leaders Cohort

The Lean Leaders program is housed in the department of Performance and Budget. Through the program, Fort Worth trains employees at all levels of the organization in process improvement methodologies. Sample projects include improving zoning requests, commercial meter readings, and chlorine shipment costs for the Water Department.

Cost: Minimal costs are associated with this structure. Expense are typically limited to the training of current employees (~$2,000-$10,000 to train initial staff in a "train the trainer" model) or to the addition of 1 FTE to lead the effort.

Benefits: This method is the most affordable and spreads expertise across the organization. Using existing staff to lead and implement process improvement may accelerate acceptance due to existing trust levels.

Challenges: Process Improvement work is an additional responsibility added to employees' existing job roles, and not their sole responsibility. This can have a potential negative impact on both employee capacity and project speed.

# TWIN FALLS PROCESS IMPROVEMENT OPERATIONAL ASSESSMENT

To inform recommendations for an organization-wide process improvement program, the team visited the City of Twin Falls (City) March 13-14, 2019. The intent of the site visit was to learn City leadership's goals related to process improvement, to assess Twin Falls' organizational culture, and to learn about current process improvement efforts.

## Methodology

A strategy for organization-wide process improvement is most effective when based upon an organization's culture and capacity. Therefore, the team spent two days with employees from across the organization who represented varying levels of the organizational hierarchy. A combination of the site visit assessment results and the research of leading practices informs the recommendations and implementation strategies for a Process Improvement (PI) program for the City of Twin Falls.

In addition to meeting with the City's Executive Leadership Team, the LICMA team interviewed approximately 40 employees from various City departments, who were separated into focus groups. The following departments were represented in the focus group interview process:

- Administrative & Financial Services
- Police
- Airport
- Fire
- Engineering
- Planning & Zoning

- Building Safety
- Parks & Recreation
- Public Works
- Human Resources
- Technology & Communications

Tenure of the employees who participated in the focus group interviews ranged from under two years of service to nearly 30 of service to the City.

Twin Falls employees were encouraged to share their candid experiences and ideas as they responded to a series of questions throughout the process. Each employee group was asked the same basic set of questions to help frame the conversations, with flexibility given to change the interview direction based on group interest. Immediately following the site visit to Twin Falls, the team's notes were compiled, then key messages, themes, and other relevant information were identified to capture immediate impressions and reflections. This compilation strategy is in accordance with qualitative research practices outlined by Miles and Huberman (1994)[7].

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[7] Qualitative Data Analysis: An Expanded Sourcebook by Michael Huberman and Matthew Miles and Huberman, 1994.

## Observations on Organizational Context

There is a sense of pride among Twin Falls' workforce along with a desire to provide good customer service to community members. The organization appears to have a reputation as being a great place to work within the Magic Valley region and is attracting strong employment candidates. City staff generally understand the *One City* philosophy and view associated organizational changes positively. Employees can readily explain what *One City* means to them and how their department implements the concept. As a result of the *One City* leadership philosophy, staff have created opportunities to collaborate with each other (e.g. the internal coordination that now occurs for permits).

Implementation of *One City*, however, is not consistent across the organization. Some employees struggle to describe the Leadership Philosophy or to list the organization's core values. Overall, employees acknowledged that achieving the ideals of the philosophy is a journey that will take time to complete. While not every department was at the same level with respect to the *One City* philosophy, the team heard many examples of *One City* wins over the two-day site visit:

- The Police, Planning, and Code Enforcement department teams coordinate closely to address public safety issues.
- The Streets department conducts After Action Reviews following snowstorms and plow routes to collect the best ideas from operators immediately following weather events.
- The Long-Term Planning Team is recognized throughout the organization. It appears to have fostered broader understanding of the City's budget, resources, and operations. Long-Term Planning team members feel like active participants in steering the direction of the City.
- Several members shared the following examples of how the organization demonstrates recognition of the importance of its employees:
  o The Values Nomination process, facilitated by a staff-team
  o Annual city-wide events
  o Annual visits from the City Manager

## Observations on Current State of Process Improvement in Twin Falls

To help the LICMA understand Twin Falls' current knowledge of process improvement and how it shows up in the organization, the core interview questions asked during the site visit were:

- *Understanding Organizational Context*:
  How would you describe the culture related to innovation and/or change?

- *Understanding Employee Context*:
  What level of understanding do you have of Process Improvement?
  Do you think Twin Falls could benefit from a citywide approach to Process Improvement? How? Department-wide? City-wide?

- *Understanding Current State of PI in TFID*:
  What do you think your role is in Process Improvement?
  Are you aware of opportunities for or have ideas related to process or productivity improvements? If you did or do, was it implemented? What happened?
  What avenues can employees currently take to implement/adopt bottom-up improvement recommendations? Is there a mechanism in place?

The team learned that by and large, Twin Falls staff are dedicated public servants who recognize that working efficiently and effectively is good stewardship of public resources. While various employees acknowledged that change can be difficult, many employees seemed eager for change that makes life easier. There is a general sense of working at (or above) capacity across the organization, specifically that the workload is growing while resources are not keeping pace. The revenue limitations of a Dillon Rule state were mentioned, and staff acknowledged the City cannot easily generate new revenue sources to address increasing demands on services. Due to this reality, it is the project team's opinion that process improvement could deliver positive results for the organization.

Most departments report that line-level improvement recommendations occur informally and/or only during the budget process (i.e. as preparation for the Long-Term Planning Meetings). During the site visit, employees reported on multiple occasions that upper management is open to ideas. One example of an informal "bottom-up" improvement initiative is evidenced in the Dierke's Lake pass for employees.

Employees of Twin Falls believe they are already undergoing "process review," but there is no consistency among departments on what it means, how to perform it, or how to measure it. One example of a current process review initiative is The Captains' Circle in the Fire Department, where fire fighters share ideas with management to improve service. Despite a variety of good examples, one constraint that Twin Falls faces is the underutilization of data

from various software systems. Effectively used, this data could be used to inform decisions, measure outcomes, and/or set performance goals.

In summary, the organization is open to an umbrella process improvement framework that is malleable to their unique departmental needs, but recommended solutions should primarily make the workload more manageable for employees for the solutions to be accepted.



## Opportunities

To summarize observations of the site visit, the team developed a list of opportunities and concerns to inform process improvement recommendations:

- Employees are passionate and enthusiastic across the organization - at different levels and in different departments.
- There is a need to efficiently deliver growing services.
- The organization will benefit by fully utilizing software systems and improving the use of data from systems to make decisions, measure outcomes, and set performance goals.
- While not interested in top-down direction, across the board the organization is open to a framework that is malleable to each department's needs and personality.
- Understanding that *One City* is a journey that takes time, the general acceptance and enthusiasm for the *One City* concept can support system-wide process improvement.
- Many employees are open to process improvement and think they are already doing it. This suggests an acceptance for an organization-wide strategy that would lend consistency to methods and outcomes.
- There is a general sense of working at or above employee capacity. Continued community growth will continue to add pressure on the organization if resources aren't appropriately planned. One employee summarized this sentiment by stating, "The organization is doubling in complexity every year.

**PROCESS IMPROVEMENT IMPLEMENTATION RECOMMENDATIONS**

The collaborative nature of Twin Falls' organization culture will support a new program initiative, such as process improvement, as evidenced by the organization's core values of "Integrity, Connection, Honesty, Commitment, and Team Work". Further strengthening collaboration within the organization is employee buy-in of the One City leadership philosophy that emphasizes teamwork, communication, and consensus.

The Twin Falls Long Term Planning (LTP) team, comprised of a cross-section of City departments, is already taking a holistic view of the annual budget and will be a valuable resource for process improvement initiatives. The formation of a new parallel team dedicated to process improvement, either under the purview of LTP or as an independent team, would enable the City to implement a program without increasing staff levels.

Possible options for the Process Improvement team, include: (1) Creating a sub-team under LTP comprised of 4-6 current LTP members or (2) Creating a team of comprised of an employee group outside of the LTP members. Rotation of PI team members will incrementally build expertise throughout the organization and will deepen the organization's "bench strength". Keeping PI team membership to only 4-6 employees will minimize training costs while maximizing expertise.

## Phase I: BUILD the Skill (6-12 months)

Goal: Develop internal capacity to lead and perform process improvement.

- *Identify the appropriate personnel to lead the organization's PI effort*. The team should include a sponsor who can provide leadership and guidance for the initial implementation phase along with 3-5 teammates who can train and coach other employees in process improvement. The teammates best selected in this initial phase are those who are known to be change and thought leaders in the organization. A team charter will ensure clear scope, authority, and goals.
- *Train the PI team in process improvement methodology.* There are several online Lean and Six Sigma courses available with costs ranging from free, for a high-level overview, up to $1,999 for the highest-level black belt certification for a self-paced online certification program[8]. Lean introduction courses may be sponsored through universities and also have an online component, like the introduction to Lean offered through the Lean Enterprise Institute at a cost of $500 per student.[9] The previously mentioned Peak Academy trainings are also options. Whichever process improvement training is chosen, all members of the Process Improvement team should attend the

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[8] https://goleansixsigma.com/lean-six-sigma-online-training-certification-pricing/
[9] https://www.lean.org/Workshops/WorkshopDescription.cfm?WorkshopId=123

same training together to ensure common methodology and language, similar to how many department heads and other staff have participated in the University of Virginia LEAD program.

- *Outline Twin Falls Process Improvement Language.* The implementation strategy must include an outline for a data-driven approach. This should include common language and steps, so that all staff involved will recognize and accept real process improvement efforts. The Peak Academy resource page has a helpful example of this in the Peak Innovation Form (see Appendix C).

## Phase II: TEST the Method (6-8 Months)

Goal: Test the structure and methodology by conducting several pilot projects.

- *Identify Pilot Projects:* Staff can identify smaller and/or easier projects to test the process improvement tools and structure. Through the interviews with Twin Falls staff, a few potential process improvement pilot programs were identified:
  - o PD Records System Implementation/Training: Several years in, staff report that there are still multiple errors and officers' requests are time-consuming. Potential outcomes could be reduction in errors and time spent processing records.
  - o Utility Billing and payments online: The current system does not notify staff when payments are made online and community members must call to ensure their service continues. A process improvement would streamline so that community members can easily pay online and avoid service disruption. Outcomes to measure could be reduced phone calls to utility billing staff and a decrease in last-minute cut-off cancellations.
- *Outline project and baseline measures.* The Peak Academy Innovation form is also a great example of how to scope out the project. All projects are more successful when thoughtfully scoped to include milestones, roles, and tasks (see figure 2). Process Improvement efforts *must* include baseline outputs to enable measuring the effort. Output Measures could include:

1) Financial savings and/or cost avoidance
2) Employee Satisfaction
3) Safety or Quality Improvements, e.g. Customer Satisfaction, Injury or Risk Reduction
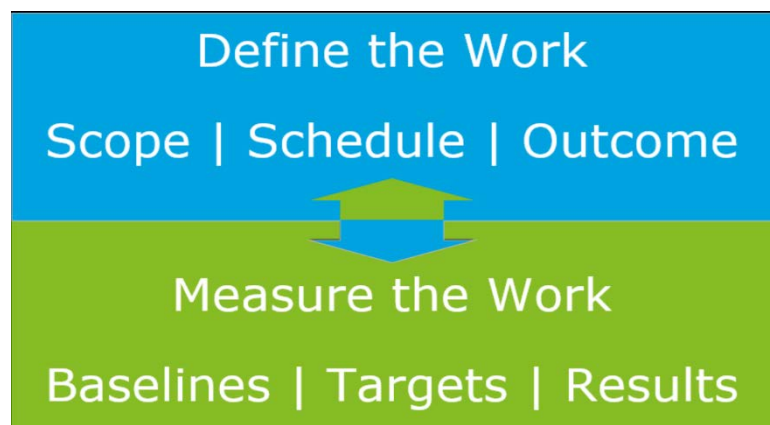


*Figure 2: Effective pilots include plans to define and measure the work.*

## Phase III: LEARN and ADJUST (Ongoing)

Goal: Measure and document the qualitative and quantitative outcomes of the first pilots to improve ongoing implementation.

- *Evaluate the results.* Measure the results, ideally 90 days after project launch, to determine the effectiveness of the project. To continuously improve and support innovation, provide staff the flexibility to start and stop for learning opportunities. Figure 3 below represents the typical results trajectory of projects, note the initial breakthrough followed by a plateau while teams improve again and then a second breakthrough in results. Survey project participants to determine the degree of success the selected methodology, planning strategy and communication had upon the project.
- *Communicate Results.* For each process improvement effort, a method of communication should be established to communicate the project results to the organization. Successes will garner support, while failures will create additional opportunities for improvement.
- *Adjust and Act.* The team can adjust the methodology based on pilot project results to continue improving the City of Twin Falls' effectiveness and efficiency.



*Figure 3: Results Trajectory of Proves Improvement Projects[10]*

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[10] https://www.isixsigma.com/methodology/kaizen/kaizen-six-sigma-ensures-continuous-improvement/

## Long-term Considerations

Ongoing education on process improvement methodologies is critical to sustaining long-term success. If new employees are trained in process improvement methodologies and current employees with process improvement knowledge continue to expand their knowledge and skillsets through experience, a culture of improvement will take root.

The benefits of continued training surpass the inherent operational improvements and reductions in waste. The continued focus on improvement will ensure it becomes engrained in an organization's culture. The Alliance for Innovation (an ICMA affiliate) provides many resources for continued education in process improvement that are tailored to local government initiatives.

Continuous improvement efforts can contribute to enhanced levels of employee engagement for many organizations. Often, employees become empowered when taking an active role in the decision making and direction of their organizations. Employees that are highly engaged work harder to improve business processes, resulting in a snowball-like positive feedback loop of continuous improvement.

## Other Recommendations

- Adopt a *continuous improvement value statement* to foster the culture of continuous improvement and solidify the City's goals and vision for PI.
- The development of *organizational performance measures* will aid in the prioritization of process improvement efforts. The City of Twin Falls can reference the ICMA Open Access benchmarks for key performance indicators (KPIs).
- Develop a method for *celebrating and sharing process improvement efforts*. Given the staff perception that process "review" is regularly occurring, a consistent way to communicate the story to the larger organization and community will allow for staff to celebrate accomplishments and learn from each project. A few methods for sharing process improvement stories to be considered are:
    - o Have a designated employee act as a reporter to write process improvement stories for inclusion in the citywide newsletter;
    - o Have a standing agenda item for directors to share successes and lessons;
    - o Share stories and recognize process improvement efforts during annual citywide events; and
    - o Present process improvement wins periodically at City Council meetings.
- Deliver *Change Management* training to promote acceptance of new processes and to help foster a culture of change; continue to implement change management strategies as projects are developed and delivered.

## Conclusion

The City of Twin Falls is well-positioned to implement an organization-wide Process Improvement program. Twin Falls' employees are eager to demonstrate good stewardship of community assets while improving organizational workload management. Staff at all levels of the organization understand and support the *One City* leadership philosophy that will facilitate and drive the establishment of a Process Improvement Program within the City. Consistent language, methodology, and change management training will be the foundation for the City of Twin Falls to deliver services more effectively and efficiently.

## RESOURCES

As it explores and finalizes plans for Process Improvement, the City of Twin Falls will find these resources helpful:

### *Training*
- **GoLeanSixSigma.com** (https://goleansixsigma.com/)
  - Lean Six Sigma Training and Certification - Online, virtual, hybrid, and onsite options. Provides a glossary of process improvement terminology.
  - Community – Podcasts, a blog, webinars and a community forum. Shares success stories by Industry.
  - Consulting – Will lead and manage process improvement events for the organization.
  - Pricing – Offers many free resources, including free Yellow Belt training, webinars, and podcasts. Provides a 20% discount on all services to governmental entities (Course Outline and Master Pricing Sheet attached as Appendix D).
- **6Sigma.us** (https://www.6sigma.us/)
  - Lean/Six Sigma Training and Certification - Online, classroom, and onsite options. Provides a glossary of process improvement terminology.
  - Community – Articles and case studies.
  - Consulting – Will lead and manage process improvement events for the organization.
- **Management Partners** (https://www.managementpartners.com/)
  - Process Improvement and Performance Management training – onsite.
  - Consulting - Will manage process improvement and performance management events for the organization. Provides many other complementing services.

### *Books*
Basics of Process Improvement.  By Tristen Boutros and Jennifer Cardella, 2016.

The Collective Potential A Holistic Approach to Managing Information Flow in Collaborative Design and Construction Environments. By Andreas Phelps, 2012

Good to Great and the Social Sectors. By Jim Collins, 2005.

Peak Performance: How Denver's Peak Academy is Saving Money, Boosting Morale and Just Maybe Changing the World. (And How You Can, Too!). By Brian Elms, 2016.

Toyota Kata: Managing People for Improvement, Adaptiveness and Superior Results. By Mike Rother, 2009.

Simplified Process Improvement: The art of process improvement decoded into 5 simple steps. By Eduardo Perez, 2017

***Websites and Tools***
[Denver Peak Academy](#)
[City of San Francisco Program](#)
[ICMA Open Access Benchmarking](#)
[GFOA: Getting Started with Process Improvement](#)
[GFOA: Less Time, Lower Cost and Greater Quality: Making Government Work Better with Lean Process Improvement](#)


***Videos***
[How to Handle Risk in Government with Brian Elms (Parts 1-3) and Washington State Government.](#)

[Lean Ohio: How Ohio is making services simpler, better, faster, and less costly](#).

[The Toyota Effect: Meals per Hour in New York City](#)



## APPENDIX

New Search
Login Page

# Position Description

**Senior Process Improvement Analyst**
Closing Date **5/31/19**
Pay Range (MIN) **64,570.44**
Pay Range (MAX) **90,721.47**
Apply Now

Added to system:
**4/16/19 11:05 AM**
Region:
**Colorado**
Location:
**City Hall**

## IMPORTANT APPLICATION INFORMATION AND INSTRUCTION

Applications will be accepted on a continuous basis until a sufficient number of qualified applications have been received.

The deadline for the first review of applications is     **May 3rd  @ 5:00pm.**    **Applicants are encouraged to apply early. Applicants that apply after the first review are not guaranteed to be considered for this recruitment. This recruitment may close at any time without notice after the first review date.**   The application must be filled out completely; stating "see resume" anywhere in the application, is not an acceptable substitute for a completed application.

**Title: Senior Process Improvement Analyst**

Welcome to the City of Aspen! This stunning mountain town is renowned for its world-class skiing, exciting outdoor adventures, and unique events that attract visitors from all over the globe. Many vacation in Aspen intending to stay only for a week or two, but are inevitably drawn to live here, seeking to experience fully all the treasures found in this town.

Here at the City of Aspen, our greatest resource is our people, and we strive to provide the best for our employees. If you have children, you can be assured they'll receive an outstanding education in the Aspen

APPENDIX A

School District. If you are seeking affordable housing, the Aspen Pitkin Housing Authority (APCHA) offers residents a variety of options to live in beautiful homes in prime locations at a reasonable price. If you are searching for an engaging environment to build your career, you'll flourish with all the opportunities offered here at the City.

### *Your Focus*

Be a project manager, innovation leader and internal business process consultant.  Lead cross-functional teams and solve complex business problems:

- *Consult*: Use tools such as design thinking, LEAN Six Sigma, quality principles and policy analysis to guide departments towards organizational excellence. As a principal resource for the City of Aspen, enjoy a diversity of projects and manage a significant portfolio of work.  Collaborate closely with internal customers and external partners in the transition from analysis to implementation and evaluation.

- *Build capacity and competencies:* Help others help themselves by designing our internal innovation and improvement academy.  Select training approaches and implement this important piece of our program offerings.  After training, reach out to new learners and others, providing expert guidance on the journey to excellence.

### *What You Bring to the Table*

- *Expert facilitation*: an ability to consistently guide groups in constructive problem solving and decision-making.
- *Relationship building*: a knack for relating to diverse groups of people, at all levels in the organization and across a variety of business lines
- *Business intelligence*:  the knowledge to consistently apply relevant quantitative and qualitative data analysis at the level appropriate for specific project needs
- *Advanced domain knowledge*: demonstrated professional experience with Lean Six Sigma, Baldrige, design thinking or other process improvement and innovation tools and techniques.

### *Welcoming You to the Mountains*

- *Moving expenses:*  Making a big move? Ask about our rental advance loans.
- *Housing:*  Transitional housing may be available for the immediate short-term.  For the longer-run, you will be able to apply for affordable City or APCHA housing.
- *Commuting:*  Need to commute? If you live down valley from Aspen, you will have no commute costs - the City provides a free bus pass for our excellent RFTA bus system.  Wait times for buses during commute times are typically 5-10 minutes, to get you on your way quickly.
- *Benefits:*  Enjoy a wide variety of benefits, including Medical, Dental and Vision coverage; 6% employer 401a contribution; 401k availability; up to $1750 in bonuses; significant employer contributions toward your medical account; $800 in "cafeteria funds" (you choose how to use); life and disability insurance; generous Paid Time Off; an extended sick leave program; and tuition reimbursement.
- *Having fun:*  Enjoy skiing? Discounted ski passes available to 4 world class ski areas in Aspen and its nearby mountain neighborhood. City golf and rec center passes are available for these wonderful additional City amenities.  Or, you can just take a hike, bike, or raft right outside your door.

### *Who Should Apply*

- Qualified candidates will have at least a Bachelor's in Business Administration, Public Administration, Data Analysis, or other relevant field; including at least five (5) years of professional experience in process improvement and/or performance measurement.
- Preferred candidates will have a Master's degree in a relevant field, previous public-sector experience, and relevant certifications and/or advanced training (such as Lean Six Sigma Black Belt).

APPENDIX A

- Any combination of experience and education that would likely provide the required abilities, knowledge and skills as determined by the City of Aspen may be substituted for the requirements above.

NOTE:  This position requires a Criminal Background Check upon hire.  Employment is contingent upon successful completion of a Criminal Background Check.

Back Share Apply Now

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APPENDIX A

## Position Information

| | |
|---|---|
| Title of Vacant Position | Process Improvement Officer |
| Job Type | Full-Time |
| Posting Type | Public |
| Department/Division | Chesapeake City Manager's Office |
| Requisition Number | 20190038 |
| Number of hours worked per week | 40 |
| Work Schedule | 8:00 AM to 5:00 PM |
| Work Site Location | City Manager's Office |
| Salary | $84,664 - $139,696 Depending on Qualifications |
| Job Description | The City of Chesapeake seeks a high-energy, results-oriented professional that is a subject matter expert in process improvement and has a proven track record of success. The Process Improvement Officer will be tasked with implementing and leading the City of Chesapeake's first process improvement program. This will include developing and delivering process improvement training and exercises with City employees. The City seeks a dynamic candidate who has vision for the program and the enthusiasm and ability to be hands-on to deliver this vision. The successful candidate will be skilled at communicating and building trust with employees at all levels. This individual is part of the City Manager's Office and reports to a Deputy City Manager. |
| | To be considered for the position, please submit a resume and cover letter in addition to the online application. |
| | First review of applications is 5/1/19; Range for the position $84,664 to $139,696. Hiring salary dependent on qualifications and experience. |
| | The City of Chesapeake is a dynamic, growing city of 353 square miles, located in the heart of Virginia's Hampton Roads region. The City operates under the council-manager form of government with the city manager having oversight for daily operations. Chesapeake city government employs approximately 3,500 people in over thirty departments. The operating budget for the city is approximately $500 million and it is the third largest city in the region. Formed in 1963, Chesapeake is home to more than 40 international companies and one Fortune 500 firm, along with hundreds of small and mid-size businesses of every description. The Chesapeake Public School system is a community asset with an excellent reputation. The City's urban core mixes with a lasting agricultural heritage and extensive amenities, including 70+ parks, community centers and libraries. Named one of the safest cities for its size by the FBI, Chesapeake takes pride in being a great place to live, work, and raise a family. |
| Required Qualifications | VOCATIONAL/EDUCATIONAL REQUIREMENT: Bachelor's degree in Business Process Engineering, Industrial Engineering, Operations Engineering, Commerce, Economics, Business Administration, or a related program preferred. Certification in process improvement and experience in the field of process improvement can be substituted for a degree. |
| | EXPERIENCE REQUIREMENT: In addition to satisfying the vocational/education requirements, this position requires six years of directly related experience in process improvement. |
| | SPECIAL CERTIFICATIONS AND LICENSES: Requires a valid driver's license and driving record in compliance with City Driving Standards. |
| | SPECIAL REQUIREMENT: Employees may be expected to work hours in excess of their normally scheduled hours in response to short-term department needs and/or City-wide emergencies. |

APPENDIX B

| | |
|---|---|
| Preferred Qualifications | Experience in positions of progressive responsibility in the process improvement field preferred.<br><br>Process improvement certification such as Black Belt, Lean, or Six Sigma preferred. |
| Special Instructions to Applicants | Position open until filled. |
| Job Open Date | 03-12-2019 |
| Job Close Date | |

**ADA Requirements Form**

**OVERALL PHYSICAL STRENTGH DEMANDS**

| | |
|---|---|
| **OVERALL PHYSICAL STRENGTH DEMANDS** | S=Sedentary - Exerting up to 10 lbs. occasionally or small weights frequently; sitting most of the time. |

**PHYSICAL DEMANDS**
C = Continuously- 2/3 or more of the time.
F = Frequently- From 1/3 to 2/3 of the time.
O = Occasionally- Up to 1/3 of the time.
R = Rarely- Less than 1 hour per week.
N = Never- Never occurs.

| | |
|---|---|
| **Standing** | O |
| **Sitting** | F |
| **Walking** | F |
| **Lifting** | O |
| **Description** | Exerting up to 10 lbs. |
| **Carrying** | O |
| **Description** | Exerting up to 10 lbs. |
| **Pushing/Pulling** | R |
| **Description** | Exerting up to 10 lbs. |
| **Reaching** | O |
| **Handling** | O |
| **Fine Dexterity** | C |
| **Kneeling** | O |
| **Crouching** | O |
| **Crawling** | N |

APPENDIX B

# Peak Innovation Form

**Innovation Name:**                                         **Start Date:**
**Who's Involved:**                                          **End Date:**

| Problem – Why Change is Needed (1-2 Sentences) |
|---|
|  |

|  | Current State (CS) Costs | Future State (FS) Costs |
|---|---|---|
| Qualitative (Feelings) |  |  |
| Money $ |  |  |
| Errors |  |  |
| Amount # |  |  |
| Time |  |  |
| Yearly Cost (Annualized) |  |  |

| Yearly Savings (CS Cost – FS Cost) |  |
|---|---|
| Yearly Savings to Customer (Value of Customers Time) |  |

| Gap Analysis – What holds us back from our Future State? |
|---|
|  |

| Wastes Observed (Check All That Apply) | | | |
|---|---|---|---|
| ☐ | Defects | ☐ | Transportation |
| ☐ | Overproduction | ☐ | Inventory |
| ☐ | Waiting | ☐ | Motion |
| ☐ | Non-Utilized Talent/Things | ☐ | Excessive Processing |

| Brainstorming | | |
|---|---|---|
| If we… | Then we… | Experiment Outcome |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

APPENDIX C

# Peak Innovation Form

## Action Plan (What Did You Do?) 1-2 Sentences

| Action Item | Assigned To | Date Completed |
|---|---|---|
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## Please Add Photos or Screenshots of What You Did

## Results (How is Everyone Better Off?) 1-2 Sentences / Updated Metrics

|  | Current State | Future State | 30 day | 60 day | 90 day |
|---|---|---|---|---|---|
| Money |  |  |  |  |  |
| Errors |  |  |  |  |  |
| Amounts |  |  |  |  |  |
| Time |  |  |  |  |  |
| Qualitative |  |  |  |  |  |

## Lessons Learned

| What Went Well (+) | What Didn't Go Well/Needs to Be Changed (△) |
|---|---|
|  |  |

## Additional Innovation Notes Here

APPENDIX C

# GoLeanSixSigma.com Course Outlines & Comparison - 2019

| | White Belt | Yellow Belt | Green Belt | Black Belt | Lean |
|---|---|---|---|---|---|
| Training Cost | FREE | FREE | $999.00 | $1,999.00 | $449.00 |
| Certification Cost | $99.00 | $299.00 | Included | Included | Included |
| Estimated Completion Time | 1 Hour | 1 Day / 8 Hours | 4 Days / 32 Hours | 6 Days / 48 Hours | 2 Days / 16 Hours |
| Learning Management System | Y | Y | Y | Y | Y |
| Training | Online, Self-Paced | Online, Self-Paced | Online, Self-Paced | Online, Self-Paced | Online, Self-Paced |
| Certification | Online, 20 Multiple Choice Questions | Online, 50 Multiple Choice Questions | Online, 130 Multiple Choice Questions | Online, 185 Multiple Choice Questions, Project and Elective | Online, 100 Multiple Choice Questions |
| Project Required | N | N | N | Y | N |
| Coaching | Optional | Optional | Optional | Included | Optional |
| Statistical Software | Optional | Optional | Optional | Optional | Optional |
| CEUs | 0.1 CEU | 0.8 CEU | 3.2 CEUs | 4.8 CEUs | 1.6 CEUs |
| PDUs | 1 PDU | 8 PDUs | 32 PDUs | 48 PDUs | 16 PDUs |

| Concept/Tool | White Belt | Yellow Belt | Green Belt | Black Belt | Lean |
|---|---|---|---|---|---|
| **INTRODUCTION PHASE** | | | | | |
| What is Lean Six Sigma? | Y | Y | Y | N | Lean Only |
| History of Lean | N | N | N | N | Y |
| Benefits of Lean Six Sigma | Y | Y | Y | N | Lean Only |
| Who Uses Lean Six Sigma? | Y | Y | Y | N | Lean Only |
| Lean Six Sigma Roles | Y | Y | Y | N | N |
| The 8 Wastes | Y | Y | Y | N | Y |
| PDCA Overview | N | N | Y | Y | Y |
| PDCA (Expanded) | N | N | N | N | Y |
| DMAIC Overview | Y | Y | Y | Y | N |
| Project Selection | N | N | Y | Y | N |
| Project Selection Facilitation | N | N | N | Y | N |
| Strategic Alignment With Project Selection | N | N | N | Y | N |
| The Road to Black Belt Certification | N | N | N | Y | N |
| Black Belt As Coach | N | N | N | Y | N |
| Build Leadership Skills | N | N | N | Y | N |
| Purpose and Project Work | N | N | N | Y | N |
| Influence Strategies | N | N | N | Y | N |
| Facilitation of High-Performing Teams | N | N | N | Y | N |
| **DEFINE PHASE** | | | | | |
| Project Charter | N | Y | Y | Y | N |

| | White Belt | Yellow Belt | Green Belt | Black Belt | Lean |
|---|---|---|---|---|---|
| Problem/Opportunity Statement | N | Y | Y | Y | N |
| Goal Statement | N | Y | Y | Y | N |
| Customer Value | N | N | Y | N | Y |
| Kano Analysis | N | N | Y | N | N |
| Affinity Analysis | N | N | Y | Y | N |
| Tree Diagram | N | N | Y | N | N |
| Voice Of the Customer (VOC) Translation Matrix | N | Y | Y | Y | N |
| Process (Gemba) Walks | N | N | Y | Y | Y |
| Process (Gemba) Walk Facilitation | N | N | N | Y | N |
| Organizational Level Process Map | N | N | Y | N | Y |
| SIPOC (High Level Process Map) | N | Y | Y | Y | N |
| Value Stream Map | N | N | Y | N | Y |
| Swimlane Map | N | N | Y | N | Y |
| Spaghetti Map | N | N | Y | N | Y |
| Communication Plan | N | N | Y | Y | Y |
| A3 | N | N | Y | N | Y |
| A3 Coaching | N | N | N | N | Y |
| A3 and PDCA | N | N | N | N | Y |
| Stakeholder Analysis | N | N | Y | Y | Y |
| Relationship Map | N | N | Y | Y | Y |
| Threats & Opportunities Matrix | N | N | Y | N | N |
| Meeting Productivity | N | N | Y | N | Y |
| Ground Rules | N | N | Y | N | N |
| RACI Matrix | N | N | Y | N | N |
| Team Dynamics (Alignment Model) | N | N | Y | Y | N |
| Plus Deltas | N | N | Y | N | N |
| Strengthen Leadership Skills | N | N | N | Y | N |
| Coach Approach - Socratic Method | N | N | N | Y | N |
| Influence Strategies – Build Ownership | N | N | N | Y | N |
| Facilitation Skills – Make Meetings Work | N | N | N | Y | N |
| **MEASURE PHASE** | | | | | |
| Selecting Measures | N | Y | Y | Y | N |
| Lean Metrics | N | N | Y | N | Y |
| Value Stream Definitions | N | N | Y | N | Y |
| Measuring Customer Demand (Takt Time) | N | N | Y | N | Y |
| Data Types | N | N | Y | Y | Y |

APPENDIX D

# GoLeanSixSigma.com Course Outlines & Comparison - 2019

| | White Belt | Yellow Belt | Green Belt | Black Belt | Lean |
|---|---|---|---|---|---|
| Basic Statistical Terms | N | N | Y | Y | N |
| P Value | N | N | N | Y | N |
| Normality and Distributions | N | N | N | Y | N |
| Anderson-Darling Test for Normality | N | N | N | Y | N |
| Data Collection Planning | N | Y | Y | Y | N |
| Operational Definitions | N | Y | Y | Y | N |
| Stratification | N | N | Y | Y | N |
| Check Sheets | N | N | Y | N | N |
| Sampling | N | N | Y | Y | N |
| Sampling Strategy | N | N | N | Y | N |
| Sampling Calculations | N | N | N | Y | N |
| Measurement Systems Analysis | N | N | Y | Y | N |
| Gage R&R – Continuous (MSA) | N | N | N | Y | N |
| Gage R&R – Discrete (MSA) | N | N | N | Y | N |
| Capturing Baseline Data | N | Y | Y | Y | N |
| Baseline Measures - Sigma, DPMO, DPU, Percent Defective, Yield, Rolled Throughput Yield | N | N | Y | Y | N |
| Process Capability (Cpk, etc.) | N | N | N | Y | N |
| Cost of Poor Quality (COPQ) | N | N | Y | N | N |
| Coach Approach - Balanced Feedback | N | N | N | Y | N |
| Influence Strategies - Future Press Release | N | N | N | Y | N |
| Facilitation Skills – Decision Making | N | N | N | Y | N |
| **ANALYZE PHASE** | | | | | |
| Process Analysis | N | Y | Y | Y | Y |
| Rework Loops | N | Y | Y | Y | Y |
| Redundancies | N | Y | Y | Y | Y |
| Bottlenecks | N | Y | Y | Y | Y |
| Inspections & Decisions | N | Y | Y | Y | Y |
| Handoffs | N | Y | Y | Y | Y |
| Value Stream Map Analysis | N | N | Y | Y | Y |
| Value-Add Flow Analysis | N | N | Y | Y | Y |
| Conduct Data Analysis | n | N | Y | Y | Y |
| Histograms | N | Y | Y | Y | Y |
| Pie & Bar Charts | N | N | Y | Y | N |
| Pareto Charts | N | Y | Y | Y | Y |
| Run Charts | N | N | Y | Y | N |
| Box Plots | N | N | Y | Y | N |
| The 5 Whys | N | Y | Y | Y | Y |

APPENDIX D

| | White Belt | Yellow Belt | Green Belt | Black Belt | Lean |
|---|---|---|---|---|---|
| The Fishbone Diagram | N | Y | Y | Y | Y |
| Develop a Hypothesis | N | Y | Y | Y | N |
| Null & Alternative Hypothesis Statements | N | N | N | Y | N |
| Practical Problem and Statistical Problem | N | N | N | Y | N |
| Confirm Hypothesis With Data | N | Y | Y | Y | N |
| Confirmation by Observation & Turning Off/On Root Cause | N | N | Y | N | N |
| Lay Hypothesis Testing Groundwork | N | N | N | Y | N |
| Test Discrete Data | N | N | N | Y | N |
| 1-Proportion | N | N | N | Y | N |
| 2-Proportion | N | N | N | Y | N |
| Chi-Square Test | N | N | N | Y | N |
| Test Continuous Normal Data | N | N | N | Y | N |
| Test for Two Variances (F-Test) | N | N | N | Y | N |
| Bartlett's Test | N | N | N | Y | N |
| One-Sample T-Test | N | N | N | Y | N |
| Two-Sample T-Test | N | N | N | Y | N |
| 1-Way ANOVA Test | N | N | N | Y | N |
| Test Continuous Non-Normal Data | N | N | N | Y | N |
| Levene's Test | N | N | N | Y | N |
| One-Sample Sign Test | N | N | N | Y | N |
| Mann-Whitney Test | N | N | N | Y | N |
| Moods-Median Test | N | N | N | Y | N |
| Test Correlation | N | N | N | Y | N |
| Regression Test | N | N | N | Y | N |
| Scatter Plot | N | N | Y | Y | N |
| Multiple Regression Test | N | N | N | Y | N |
| Coach Approach - Guide Hypothesis Testing | N | N | N | Y | N |
| Influence Strategies – Opt-Out Techniques | N | N | N | Y | N |
| Facilitation Skills – Help/Hinder | N | N | N | Y | N |
| **IMPROVE PHASE** | | | | | |
| Team Member Review | N | N | Y | N | N |
| Brainstorming Solutions | N | N | Y | N | N |
| Analogy | N | N | Y | N | N |
| Anti-Solution | N | N | Y | N | N |
| Brain-Writing | N | N | Y | N | N |
| Chanelling | N | N | Y | N | N |
| Design of Experiments (DOE) | N | N | N | Y | N |

APPENDIX D

# GoLeanSixSigma.com Course Outlines & Comparison - 2019

| | White Belt | Yellow Belt | Green Belt | Black Belt | Lean |
|---|---|---|---|---|---|
| DOE – One Factor At a Time | N | N | N | Y | N |
| DOE – Two Factorial | N | N | N | Y | N |
| DOE – Full Factorial | N | N | N | Y | N |
| Lean Principles - Value, Flow, Pull, Perfection | N | Y | Y | N | Y |
| Create Flow | N | Y | Y | N | Y |
| Batch Size Reduction | N | Y | Y | N | Y |
| Single Piece Flow | N | N | Y | N | Y |
| Changeover Reduction (SMED) | N | N | Y | N | Y |
| Work Cell Design | N | N | Y | N | Y |
| Workload Balancing and Demand Levelling | N | N | Y | N | Y |
| Cross-Training | N | Y | Y | N | Y |
| Parallel Processing | N | Y | Y | N | N |
| Kanbans & Supermarkets | N | N | Y | N | Y |
| Standard Work | N | Y | Y | N | Y |
| Standard Work Worksheet | N | N | Y | N | N |
| 5S | N | Y | Y | N | Y |
| Future State Map | N | N | Y | Y | Y |
| Future State Value Stream Map | N | N | Y | N | Y |
| Impact Effort Matrix | N | N | Y | Y | N |
| Weighted Criteria Matrix | N | N | Y | N | N |
| Solution Selection Matrix | N | N | Y | N | Y |
| FMEA (Failure Modes & Effects Analysis) | N | N | Y | N | N |
| Mistake-Proofing (Poka-yoke) | N | Y | Y | N | Y |
| Visual Management | N | Y | Y | Y | Y |
| Andons | N | N | Y | N | N |
| Kanban Boards | N | N | Y | N | N |
| Task Boards | N | N | Y | N | Y |
| Rapid Improvement Event (Kaizen) | N | N | Y | N | Y |
| Quick Wins | N | N | Y | N | Y |
| Pilot the Solution | N | N | Y | N | Y |
| Multi-Phase Implementation | N | N | Y | N | Y |
| Full-Scale Rollout | N | N | Y | N | N |
| Implementation Plan | N | N | Y | Y | N |
| Coach Approach - Solving for Root Cause | N | N | N | Y | N |
| Influence Strategies – Building Networks | N | N | N | Y | N |
| Facilitation Skills – Using Failure and LCS | N | N | N | Y | N |
| Build a Lean Culture | N | N | N | N | Y |

# GoLeanSixSigma.com Course Outlines & Comparison - 2019

| | White Belt | Yellow Belt | Green Belt | Black Belt | Lean |
|---|---|---|---|---|---|
| **CONTROL PHASE** | | | | | |
| Monitoring & Response Plan | N | Y | Y | Y | N |
| Select Control Charts | N | N | Y | Y | |
| I & MR Chart | N | N | Y | Y | |
| X-Bar & R Average and Range Chart | N | N | N | Y | |
| X-Bar & S Average and Standard Deviation Chart | N | N | N | Y | |
| P Chart | N | N | Y | Y | |
| nNP Chart | N | N | N | Y | |
| C Chart | N | N | N | Y | |
| U Chart | N | N | N | Y | |
| Documentation | N | Y | Y | Y | N |
| Storyboard | N | Y | Y | Y | N |
| Executive Summary | N | N | Y | N | Y |
| Pursuit of Perfection | N | N | Y | N | Y |
| New Target - Waste Walk | N | N | Y | N | N |
| Innovation Transfer | N | N | Y | Y | N |
| Influence Strategies – Maintain the Gains | N | N | N | Y | N |
| Best Practices for Completing a Project | N | N | N | Y | N |
| Leader Standard Work | N | N | N | N | Y |
| Leader Task Boards | N | N | N | N | Y |
| Leader Process Performance Board | N | N | N | N | Y |
| Leader Huddle Meetings | N | N | N | N | Y |
| Leader Process Walks | N | N | N | N | Y |

APPENDIX D

# Workshop and Training Options

| Level | Product | Short Description | Time to Complete | Group Size | Base Price |
|---|---|---|---|---|---|
| White Belt | Lego Workshop | A fun, high energy interactive simulation using Legos that emphasize Lean concepts such as: flow, waste elimination, batch size reduction, single piece flow and takt time.<br><br>This Lego simulation can help build momentum towards future continuous improvement efforts. Participants work to fix a problem, and conduct multiple rounds of improvement in order to improve a process.<br><br>It works well for all levels of organizations from Senior Leadership to front-line staff. It can be used to introduce continuous improvement, prepare Yellow Belts, Green Belts and/or educate Leadership. | 1 Day<br><br>2 Groups<br>4 Hours/Session | Up to 50 | $3,000.00 |
| Yellow Belt | FastPitch Workshop | A fun, effective proof-of-concept simulation that introduces Lean Six Sigma and builds momentum towards future continuous improvement. Participants map processes, track data and conduct multiple rounds of improvement in a single day.<br><br>Use it to: Quickly and effectively build buy-in and momentum for Lean Six Sigma for all levels of your organization. | 1 Day | Up to 25 | $6,000.00 |
| Yellow Belt | | FastPitch Kit (required) | | | $1,000.00 |
| Yellow Belt | | Optional Workbooks (include complimentary Yellow Belt Training & Certification) | | | $75/each |
| Yellow Belt | FastPitch Train-the-Trainer Workshop | Many companies have integrated FastPitch into their foundational training for managers and project teams. To meet their needs we've created a Train-the-trainer program to bring the necessary skills in house.<br><br>We begin by developing your internal session leaders as assistant trainers who are able to support the FastPitch sessions and provide Lean Six Sigma coaching to the session participants. Once they become confident and skilled, we transition them to become Lead Facilitators. | 2 Days | Up to 5 | $3,000.00 |
| Yellow Belt | | Licensing for FastPitch Material (required for internally led FastPitch Workshops) | | | $5,000.00 |
| Yellow Belt | Online Flipped Classroom Facilitation for Yellow Belts | Flipped Classroom Facilitation makes it easy for learners to complete online learning modules at their own pace and own space! Then the learners can meet in between online modules for live or online group sessions.<br><br>The group sessions create some structure around completing the modules and provides dialogue between learners to enhance the learning. The focus of these group sessions is to solidify learning, apply the concepts and get project work completed. | 2 - 1.5 hour Sessions | Up to 15 | $1,312.50 |
| Yellow Belt | | License per Learner | | | $99.00 |
| Green Belt | Online Flipped Classroom Facilitation for Green Belts | Flipped Classroom Facilitation makes it easy for learners to complete online learning modules at their own pace and own space! Then the learners can meet in between online modules for live or online group sessions.<br><br>The group sessions create some structure around completing the modules and provides dialogue between learners to enhance the learning. The focus of these group sessions is to solidify learning, apply the concepts and get project work completed. | 5 - 1.5 hour Sessions | Up to 15 | $10,718.75 |
| Green Belt | | License per Learner | | | $699.00 |
| Green Belt | Onsite Flipped Classroom Facilitation for Green Belts | Flipped Classroom Facilitation makes it easy to complete online learning modules at their own pace and own space! Then the learners can meet in between online modules for live or online group sessions.<br><br>The group sessions create some structure around completing the modules and provides dialogue between learners to enhance the learning. The focus of these group sessions is to solidify learning, apply the concepts and get project work completed. | 5.5 Days | Up to 15 | $19,500.00 |
| Green Belt | | License per Learner | | | $699.00 |
| Green Belt | Onsite Green Belt Workshop | Kickstart your problem-solving culture with a face-to-face project workshop. Set up your Green Belt Candidates to learn how to analyze and solve process issues by applying the tools and concepts to a real problem.<br><br>Participants receive real-time feedback and make forward progress on a meaningful project in five days.<br><br>Notes:<br><br>- Project Required<br>- Project Application<br>- Tools & Concepts/Lecture Readily Applicable to Project<br><br>Logistics:<br><br>- Workshop Time: 5 Days w/ optional 6th day for Project Presentations | 6 Days | Up to 15 | $19,500.00 |
| Green Belt | | License per Learner | | | $699.00 |
| Black Belt | Onsite Flipped Classroom Facilitation for Black Belts | Flipped Classroom Facilitation makes it easy to complete online learning modules at their own pace and own space! Then the learners can meet in between online modules for live or online group sessions.<br><br>The group sessions create some structure around completing the modules and provides dialogue between learners to enhance the learning. The focus of these group sessions is to solidify learning, apply the concepts and get project work completed.<br><br>Train-the-Trainer Workshop Included | 5.5 Days | Up to 15 | $18,000.00 |
| Black Belt | | License per Learner | | | $999.00 |
| Leadership | Leadership Training Workshop | The interactive Leadership Workshop focuses on understanding the needs of your teams and flexibly leading them by applying the right balance of direction and support.Use it to: Increase employee and leader engagement, improve productivity and create efficient and effective communication.<br><br>Use it to: Increase employee and leader engagement, improve productivity and create efficient and effective communication. | 1 Day | Up to 25 | $3,000.00 |
| Leadership | Leadership Train-the-Trainer Workshop | Train-the-Trainer Workshop for the Leadership Workshop | 1 Day | Up to 5 | $3,000.00 |
| Leadership | Champions Workshop | 1-day workshop that educates leaders to play a successful role in building a process improvement culture. Leaders learn the 5-step DMAIC method of Lean Six Sigma, discuss key strategic opportunities within the organization while focusing on how they can enable process change.<br><br>Using the experiential event [FastPitch Workshop] as a foundation, executive sponsors focus on the parallel opportunities to reduce waste within each business unit or department.<br><br>Sponsors work together to assess what is necessary to build a process improvement culture, identify waste, outline process improvement opportunities and then assign team leaders to projects." | 1 Day | Up to 25 | $3,000.00 |
| Leadership | | Workbooks | | | $75/each |
| Leadership | Strategic Planning Workshop | The Strategic Planning Workshop guides leaders through a 5-step process to create a Strategic Plan for launching and scaling a successful Lean Six Sigma culture.<br><br>Use it to: Build a solid, streamlined Lean Six Sigma program that will drive operational excellence throughout your organization. | 1 Day | Up to 25 | $3,000.00 |
| N/A | Kaizen Event Facilitation | A Kaizen Event involves key process participants focusing on solving a narrowly scoped process improvement opportunity. The difference between Kaizen and typical workshops is threefold:<br><br>- The planning for the event is extensive<br>- Leadership has given explicit approval for change<br>- The agreed upon improvement takes place before the Kaizen event is completed | 3.5 Days | Up to 25 | $10,500.00 |
| N/A | Kaizen Event Train-the-Trainer Workshop | | 1 Day | Up to 5 | $3,000.00 |

**Note that the costs listed above do not include Consultant Expenses and Optional Add-Ons for Training Costs, such as Materials and Workbooks**