This training program is structured based on the excerpts from "Lean Six Sigma White Belt Training 201-1.pdf," created by O.A.A.C.Q.I. BY KANYE GARDNER – DIRECTOR OF CQI. The program covers foundational concepts of Operational Excellence, Lean methodology, continuous improvement cycles, waste reduction, and root cause analysis techniques.

Module 1: Managing for Operational Excellence

Module 2: Using Lean to Perfect Organizational Process

Module 3: Getting to the Root of a Problem

Lean Six Sigma White Belt Training Program Overview Section 1 - Module 1: Foundational Concepts of Operational Excellence

Objective: Define Operational Excellence and identify core methodologies used for organizational improvement.

Topic	Key Learning Points & Details (Citations)
Operational Excellence (OpEx)	OpEx is defined as the **improvement of quality and efficiency of an organization's internal processes**.
Understanding OpEx	1. **Delivering Value to Customer** (Understanding Voice of Customer - VOC). 2. **Key Performance Indicators (KPIs)** (Keep track and set targets). 3. **Business Process Improvement** (Minimize **WASTE** to be effective and efficient). 4. **Achieve High Quality** (Eliminate Rework through Error Proofing). 5. **Organizational Discipline** (Use Standard Operating Procedures—Same Way Every time).
Building the Foundation	Key organizational elements include: Leadership and Change Management (Inspire and support CQI), Establishing Standards in Business Processes, Monitoring Performance with KPIs (Align goals with mission/vision), Organizational Culture focused on Sustainable Excellence, and Enterprise-Wide Alignment (Strategies, Policies, Decisions).
Excellence Methodologies	1. **Lean:** Project-Based Improvements focusing on eliminating waste, flow, speed, and quality. 2. **Six Sigma / DMAIC:** Define, Measure,

Analyze, Improve, Control – using data to eliminate defects and variability. 3. **Kaizen:** People focused on Continuous Quality Improvement (CQI) using activities/waste reduction methods. 4. **Total Quality Management (TQM):** All members are committed to maintaining high standards of work. 5. **PDCA/PDSA:** Plan Do Check Act (or Plan Do Study Act).

Lean Tools for Workplace Efficiency and Waste Reduction

Objective: Understand and apply the 5S process for workplace organization and identify the seven forms of process waste.

Topic	Key Learning Points & Details (Citations)
5S Process Overview	5S is a Lean tool focused on **eliminating waste and maximizing value-added work**. Its goal is to create and maintain an organized, clean, safe, and efficient setting. It helps eliminate waste like search, travel, transporting materials, inventory, and hazards.
The 5 Ss	1. **Sort** (Organization): Distinguish between what is needed and what is not needed, and remove the latter. 2. **Straighten** (Orderly): Enforce a place for everything and everything in its place. Locations should be obvious and easy to identify. 3. **Shine** (Cleanliness): Clean up the workplace and look for ways to keep it clean. Cleaning materials should be available. 4. **Standardize** (Adherence): Maintain and monitor adherence to the first three Ss. Ensure standards are known, visible, and followed. 5. **Sustain** (Self-Discipline): Follow the rules to keep the workplace "6S-right" (maintain the gain). This involves self-monitoring and using an ongoing audit and feedback system.
Eliminating Waste: TIM WOODS	**TIM WOOD** is an acronym representing the 7 forms of waste found in processes that should be reduced or eliminated: **T**ransportation (Moving items or information), **I**nventory (Items or information that customer has not received), **M**otion (Excessive movement within workspace), **W**aiting (Waiting for information or items to arrive), **O**verprocessing (Doing more work than necessary), **O**verproduction (Doing work before it is needed), and **D**efects (Mistakes and errors that need to be reworked). Note: The source also lists **Skills** (Not using workers to fullest of abilities) as an

observation type, but TIM WOOD represents the seven core forms of waste.

Getting to the Root of a Problem PT1

Objective: Explain the steps of the PDSA cycle and its role as a framework for problem solving and organizational learning.

Topic	Key Learning Points & Details (Citations)
PDSA Cycle	The PDSA cycle (Plan – Do – Study – Act) is a **framework for problem solving, continuous improvement, and change**. It provides a simple, structured approach for solving quality-related problems. Multiple iterations may be needed to permanently solve a problem.
Benefits	PDSA encourages a methodical way of problem solving. It ensures that teams plan, test, and incorporate feedback before full-scale implementation, which increases knowledge gained from solving problems, failures, and feedback.
Plan	**The team selects the problem** (or process to be improved), identifies objectives, analyzes the current situation, and identifies, selects, and schedules solution alternatives. Useful tools include Gap analysis, waste analysis, and process mapping.
Do	The solution is **tested on a small-scale basis**. This step involves collecting data for later analysis, measuring progress, and validating benefits before full commitment. Useful tools include Gantt charts and data collection methods.
Study	This involves **analyzing collected data and comparing actual results against planned objectives**. Teams evaluate how well the solution worked, identify unexpected issues and their causes, and summarize key learnings. You may need to repeat the *Do* and *Study* phases to get optimum results. Tools include Graphical analysis and Pareto analysis.
Act	Involves **acting on the feedback and lessons learned and implementing the solution fully**. Key activities include standardizing, documenting, sustaining the improved process, and integrating it into the organization's system. Tools include control planning and standard work.

Getting to the Root of a Problem PT2

Objective: Learn systematic techniques (Stakeholder Input, 5 Whys, Fishbone Diagrams) for investigating and uncovering the root causes of organizational problems.

Topic	Key Learning Points & Details (Citations)
Stakeholder Engagement	The first step is **Identifying Stakeholders** (customers internally/externally, upstream/downstream). Then, gather their input (1 on 1, being open to feedback) and gain their trust (trust their opinion, seek multiple levels of feedback). Organizational problems often stem from Systems, Policies, Documentation, Procedures, or Communication.
5 Whys Technique	This technique is used to uncover causes. The process has 7 steps: 1. Assemble a Team. 2. Define the Problem. 3. **Ask the First "WHY?"** 4. **Ask "WHY?" Four More Times.** 5. Know When to Stop. 6. Address the Root Cause. 7. Monitor Your Measures. It is recommended to ask "Why it is happening?" an **enough time (recommended 5 times)** for each possible cause listed on a primary branch until the root cause is found.
Fishbone (Cause & Effect) Diagram	Use this technique **when identifying possible causes for a problem**. The diagram is aimed at finding root causes of problems that have already occurred and is based on collected data and information.
Fishbone Steps	1. Agree on the problem statement (effect) and write it at the center right. 2. Brainstorm the major categories of causes (often generic headings like **Methods, Machines (equipment), People (manpower), Materials, Measurement, and Environment**). Other groupings might include Management, Software, Hardware, Environment (MSEL group) or 4M (Man, Machine, Material, Method). 3. Write these categories as branches. 4. Brainstorm all possible causes, writing them as smaller branches off the appropriate category. 5. **Ask "Why does this happen?"** about each cause to generate deeper levels of causes (sub-causes), creating layers of branches which indicate causal relationships. 6. Continue until the group runs out of ideas or the root cause is circled.

Lean Six Sigma White Belt Training Quiz 101 (10 Questions)

Please choose the best answer or fill in the blank for the following questions, drawing solely on the information provided in the training program sources.

1. Operational Excellence is fundamentally defined as an improvement of the quality and efficiency of an organization's _____. A. Market share B. External reputation C. Internal processes D. Product line
2. Which excellence methodology is project-based, focuses on eliminating defects and variability, and uses the DMAIC sequence? A. Kaizen B. Lean C. Total Quality Management (TQM) D. Six Sigma
3. The 5S process is a Lean tool used for workplace organization, ultimately focusing on eliminating waste and maximizing _____ work.
4. Which step of the 5S process requires you to distinguish between what is needed and not needed and remove the latter? A. Straighten B. Sort C. Standardize D. Sustain
5. What are the four logical sequence steps of the PDSA cycle? _____, _____, _____, _____.
6. In the PDSA cycle, what is the primary activity of the *Do* phase? A. Documenting the implemented solution fully. B. Analyzing collected data against planned objectives. C. Selecting the problem and identifying objectives. D. Testing the solution on a small-scale basis and collecting data.
7. The acronym TIM WOOD represents the seven forms of process waste. What does the 'W' stand for? A. Waste B. Walking C. Waiting D. Workers
8. When addressing organizational problems, initial stakeholder engagement requires identifying who your customers are (internally/externally) and what three types of relationships they may have with the process? A. Upstream, downstream, and lateral B. Upstream, downstream, and internal C. Upstream, downstream, and third-party D. Upstream, downstream, and external
9. What is the recommended number of times to ask "Why?" for each possible cause when using the 5 Whys Technique to find the root cause? A. At least 2 times B. Recommended 5 times C. Exactly 7 times D. 3 to 4 times
10. When constructing a Fishbone (Cause & Effect) Diagram, which of the following is *not* listed as a generic heading (category of causes) often used? A. Methods B. Machines C. Costs D. People

---

Quiz Answer Key

1. C. Internal processes.
2. D. Six Sigma.
3. Value-added.
4. B. Sort.
5. Plan, Do, Study, Act.
6. D. Testing the solution on a small-scale basis and collecting data.
7. C. Waiting.
8. B. Upstream, downstream, and internal (Internal/External are part of the initial identification, but upstream and downstream are specified relationships mentioned alongside them). *Note: The source specifies "internally / externally – upstream - downstream" in Step 1 of Identifying Stakeholders*.
9. B. Recommended 5 times.
10. C. Costs (The generic headings listed are Methods, Machines, People, Materials, Measurement, Environment).

This training program is designed based on the provided excerpts from the "Lean Six Sigma White Belt Training 201-2" materials, focusing on key concepts, methodologies, and principles of both Lean and Six Sigma.

Module 4: Six Sigma and Lean Foundations and Principles

Lean Six Sigma White Belt Training Program

Module 1: Introduction and Purpose of Six Sigma

Objective: To define Six Sigma, understand its purpose, and review its historical context and evolution.

1.1 What is Six Sigma?

Six Sigma is defined as an **Organizational System and Improvement methodology**. It utilizes a tool kit to solve problems. Six Sigma is not limited to just manufacturing applications.

1.2 Value and Purpose

The core purpose of Six Sigma is to **reduce variation** and inefficiencies while improving quality. Key values of Six Sigma to an organization include:

- Reducing operation cost.
- Addressing Cost and Revenue.
- Focusing on the **Voice of the Customer (VOC)** to drive change.
- Improving Customer Satisfaction.
- Driving fiscal operations.

Potential organizational benefits include lower operating costs and greater customer loyalty.

1.3 Evolution of Quality Improvement

Six Sigma methods have evolved from the foundational work of forefounders such as **Walter Shewhart, Dr. Edward Deming, and Dr. Joseph Juran**. Concepts related to continuous improvement that preceded or support Six Sigma include:

- The PDCA Cycle (Plan, Do, Check, Act).
- Total Quality Management (TQM) in the 80's.

- ISO9000 in the 90's.
- The Baldridge Criteria for Performance Excellence (which focuses on areas like Leadership, Strategy, Customers, and Operations).

Module 2: The Six Sigma Methodology (DMAIC)

Objective: To understand the structure, requirements, and steps of the DMAIC model.

2.1 DMAIC Model Overview

The Six Sigma methodology uses the **DMAIC Model for Improvement**. DMAIC stands for:

1. **D**efine
2. **M**easure
3. **A**nalyze
4. **I**mprove
5. **C**ontrol

The DMAIC methodology requires a specific organizational structure, including a **steering committee and a Six-Sigma Green/Black Belt & Project Champion**. Compared to the PDSA cycle (which has four parts), DMAIC has five. Six Sigma requires rigor and focuses on Charters for project management and KPIs for managing and controlling quality.

2.2 Key Steps within DMAIC Phases

DMAIC Phase	Key Actions and Tools
DEFINE	Gather data, identify the largest problem, identify stakeholders (SIPOC), draft the Project Charter, and **obtain a signed Project Charter**.
MEASURE	Prioritize drivers using a **Pareto chart**. Observe the current state using tools like VSM and Process Maps. Validate whether the data being utilized is valid. ******(Completes Measure Phase tollgate review)******.
ANALYZE	Determine if the problem is due to common or special cause. Brainstorm potential causes (Fishbone Diagram). If common cause, identify variation sources (Multi-Vari Studies). If special cause, identify the root cause (5 Why's). Validate root cause with data. ******(Completes Analyze Phase tollgate review)******.

IMPROVE	Brainstorm solutions (Mistake Proofing). Identify top actions (Multivoting). Test solutions via small-scale improvements and determine statistical validity (Hypothesis Tests). Develop a full implementation plan (Gantt). ******(Completes Improve Phase tollgate review)******.
CONTROL	Determine systems/reports to monitor results. Estimate financial benefits. Schedule and review results for 30-60-90 days. Communicate success and lessons learned, and perform a final review after one year. ******(Completes Control Phase tollgate review and Project Summary Report)******.

Module 3: Introduction to Lean Methodology

Objective: To define Lean, identify its core value drivers, and understand the concept of waste.

3.1 Purpose and Value of Lean

Lean is focused on **reducing waste across the value stream**. The objective of Lean is to remove or reduce waste within a process. Lean aims to create more value to customers with fewer resources. Key goals include:

- Maximizing Value.
- Better efficiency.
- Improving Speed.
- Improving Quality and Customer Satisfaction.

Key concepts in Lean include **Gemba** (Go to the Floor) and **Kaizen** (Employee Involvement in Continuous Improvement). Lean identifies activities as either Value added or Non Value Added (WASTE).

3.2 The Seven Forms of Waste (TIM WOOD)

TIM WOOD is an acronym representing the 7 forms of waste found in processes that should be reduced or eliminated.

Waste Category	Definition/Effect	Examples (Academic/Administrative)
Transportation	Moving items or information unnecessarily.	Administrative staff handing off work between several people; students using cloud storage to transport work.

Inventory	Items or information the customer has not received.	Printing new procedures every year and throwing out old copies; a library stocking too few copies of a highly demanded book.
Motion	Excessive movement within the workspace.	Walking to poorly located office machines; scheduling classes for a single course in widely separated locations.
Waiting	Waiting for information, decisions, or resources.	Waiting for decisions to be approved; students waiting for results or a lecture to start.
Overproduction	Doing work before it is needed; excess "work in process".	Processing a large number of applications all at once; requiring all faculty to satisfy standard workload expectations regardless of whether the work is needed.
Overprocessing	Doing more work or making the process more complex than necessary.	Completing reports no longer necessary; having to submit both an electronic and paper copy of assignments; unnecessary paperwork.
Defects	Mistakes and errors.	Inability to process admissions due to missing information; unclear assignment requirements leading to work being redone.

3.3 Common Lean Tools

Lean utilizes specific tools to eliminate waste and standardize processes:

- **Poka-Yoke:** Error Proofing.
- **5S:** Sort, Straighten, Shine, Standardize, Sustain.
- **Process Maps and Value Stream Maps** (VSM).
- **Standard Operating Procedures**.
- **Data collection tools:** Check Sheets, Pareto Charts, Histograms, Surveys.

Module 4: Relationship between Lean and Six Sigma

Objective: To differentiate between Lean and Six Sigma based on their primary objectives and methodologies.

Lean and Six Sigma are continuous improvement methodologies that, when combined, offer a roadmap towards excellence.

Feature	Lean	Six Sigma
Primary Focus	**Efficiency**	**Effectiveness**
Objective	Identifying Value; **Reducing Waste** in Processes	**Reducing Variation**; Breakthrough Process
Methodology	4 Steps - **PDSA** (Plan, Do, Study, Act)	5 Steps - **DMAIC** (Define, Measure, Analyze, Improve, Control)
Tools	Removing unnecessary steps, Improving speed	Identifying Root Cause, Statistical Tools & Data

Lean Six Sigma White Belt Training Quiz 201 (10 Questions)

Please select the best answer for the following 10 questions based solely on the training material provided.

1. What is a primary objective of Six Sigma? A. To introduce new products quickly. B. To remove or reduce variation within a process. C. To focus mainly on reducing inventory. D. To use the four-step PDSA cycle.

2. Which quality improvement methodology uses the DMAIC process? A. Lean B. Total Quality Management C. Six Sigma D. PDSA

3. The DMAIC acronym stands for: A. Design, Manufacture, Assess, Implement, Check. B. Define, Measure, Analyze, Improve, Control. C. Determine, Monitor, Analyze, Improve, Certify. D. Define, Measure, Assess, Implement, Control.

4. What term represents the acronym used to define the 7 forms of waste in processes? A. QCD B. VOC C. SIPOC D. TIM WOOD

5. Which form of waste is represented by the administrative staff having to process a large number of applications all at once? A. Motion B. Overprocessing C. Overproduction D. Defects

6. Which set of concepts is associated primarily with Lean methodology? A. Statistical Tools, Variation Reduction, DMAIC B. Efficiency, Waste Reduction, PDSA C. Six Sigma Belts, Project Champion, Hypothesis Tests D. Cost of Quality, Baldridge Criteria, Green Belts

7. In the Six Sigma DEFINE phase, what tool is specifically used to identify stakeholders? A. Pareto chart B. VSM C. SIPOC D. Fishbone Diagram

8. What does Six Sigma use heavily to identify root causes and drive continuous improvement? A. Employee happiness surveys. B. Statistical Tools & Data. C. Anecdotal evidence. D. Flexible study phases.

9. According to the training material, what is a required component for a major Six Sigma project to start? A. Final Project Summary Report B. Leadership Buy-in C. Complete Measure Phase tollgate review D. Only a Team Leader

10. In the DMAIC ANALYZE phase, if a problem is due to a special cause, which tool is recommended to identify the root cause? A. Multivoting B. VSM (Value Stream Map) C. 5 Why's D. Gantt Chart

Quiz Answer Key

1. **B.** To remove or reduce variation within a process.
2. **C.** Six Sigma.
3. **B.** Define, Measure, Analyze, Improve, Control.
4. **D.** TIM WOOD.
5. **C.** Overproduction (excess "work in process").
6. **B.** Efficiency, Waste Reduction, PDSA.
7. **C.** SIPOC.
8. **B.** Statistical Tools & Data.
9. **B.** Leadership Buy-in.
10. **C.** 5 Why's.

Lean Six Sigma White Belt Training:

Module 5: Six Sigma: Team Basics, Roles, and Responsibilities Summary

This training program is designed using the provided excerpts from "Lean Six Sigma White Belt Training 301: Six Sigma: Team Basics, Roles, and Responsibilities Summary". The goal is to provide a comprehensive overview of Six Sigma team structures, decision-making, communication, and basic roles.

Training Program Outline

Module 1: Six Sigma Team Types and Team Evolution

A. Team Types The sources identify several key types of Six Sigma teams:

- **High Performing Teams:** These teams are characterized by sharing skills, ideas, collaboration, and empowering individuals.
- **Quality Teams:** These teams drive efficiency, improve process, and organize operations.
- **Self-Managed Teams:** These teams are flexible, agile, self-sufficient, and highly effective.

B. Value of Six Sigma Teams Six Sigma teams offer significant value because they are often **Multidisciplinary & Cross Functional**, adopting a **"Swiss Army Knife Approach"**. Furthermore, they maintain flexibility and clearly define roles, responsibility, and resources.

C. Team Evolution (Stages of Development) Teams evolve through specific stages:

1. **Forming:** This stage is described as "Conjugal Beginnings," involving getting acquainted and being full of uncertainty.
2. **Storming:** This is the most difficult stage ("Con'tention"). During this phase, conflicts arise, and teams address problems while working toward alignment of goals and purpose.
3. **Norming:** This stage is marked by clarity, collaboration, communication, and cohesion, where the team focuses on getting the work done.
4. **Performing:** Teams reach consensus and cooperation, becoming organized and well functioning.

5. **Adjourning:** This stage signifies completion and accomplishing a goal.
6. **Recognition:** The final activity involves celebrating and acknowledging the great works that were done.

Module 2: Team Decision-making Techniques

Effective teams utilize specific techniques to facilitate decision-making. The sources list several techniques:

1. Brainstorming – Affinity Diagrams
2. Nominal Group Technique
3. Multi-voting
4. Delphi Technique
5. Rank the Possibilities
6. Pros & Cons List

Focus: Brainstorming Technique Brainstorming should be used when:

- A broad range of options is desired.
- Creative, original ideas are desired.
- Participation of the entire group is desired.

Brainstorming Procedure Rules When implementing brainstorming, specific rules must be reviewed with the entire group:

- No criticism, no evaluation, no discussion of ideas.
- All ideas are valid and worthy of consideration.
- All ideas are recorded.
- **Piggybacking**—combining, modifying, or expanding others' ideas—is encouraged. The procedure requires recording all ideas until several minutes of silence produce no more. Note that no discussion or evaluation of any kind is permitted during the generation phase.

Module 3: Team Communication Methods

Effective team communication is crucial and involves various channels:

- **Importance of Effective Team Communication:** This includes interacting with stakeholders, ensuring two-way communication, utilizing digital methods, and employing top-down and bottom-up flows.
- **Using Agendas for Communication:** Agendas provide clarity and organization.
- **Meeting Minutes:** These serve as a record of actions and decisions.
    - Best practices for minute-taking include asking for clarification if needed and only recording the important points of the discussion. Also, the minute taker should ideally not be a participant.
- **Using Project Status Reports:** These reports ensure accountability to the team and often utilize tools like Project Plans and Gant Charts.

Module 4: Six Sigma Roles and Responsibilities (Focus on Yellow Belts)

While the training covers Six Sigma roles generally, the sources specifically detail the characteristics of Yellow Belts:

- Yellow Belts **use their expertise to benefit the project**.
- They **assist other members** of the project team.
- They **engage in data collection and problem solving**.

Lean Six Sigma White Belt Training Quiz 301 (10 Questions)

Please answer the following questions based only on the provided training material.

1. Which type of Six Sigma team focuses on sharing skills, collaboration, and empowering individuals? a) Quality Team b) Self-Managed Team c) High Performing Team d) Process improvement

2. In the team evolution model, which stage is described as "Con'tention," the most difficult, involving conflict and addressing problems? a) Forming b) Norming c) Storming d) Performing

3. When a team has reached a point of "Consensus & cooperation" and is described as "Organized and well functioning," what stage of development is it in? a) Norming b) Performing c) Adjourning d) Recognition

4. What term is used for the concept of combining, modifying, or expanding on others' ideas during a brainstorming session? a) Critical evaluation b) Piggybacking c) Alignment d) Consensus

5. According to brainstorming rules, which action is explicitly forbidden during the idea generation phase? a) Recording all ideas b) Reviewing the topic c) Discussion or evaluation of ideas d) Thinking silently about the question

6. What is the value proposition of a Six Sigma team being "Multidisciplinary & Cross Functional"? a) It promotes agile development. b) It increases accountability. c) It allows for a "Swiss Army Knife Approach." d) It reduces uncertainty during the Forming stage.

7. Which method of team communication is primarily used to provide clarity and organization? a) Meeting Minutes b) Using Agendas c) Project Status Reports d) Top-Down communication

8. Which of the following is a characteristic of a Six Sigma Yellow Belt? a) They are typically the Six Sigma team leads. b) They focus solely on high-level process strategy. c) They engage in data collection and problem solving. d) They only assist team members but do not use their expertise.

9. A team's goal is to find a faster way to get parts to a manufacturing floor, and they focus on solutions that are easy to implement and have quick results. What team type best fits this description? a) Quality team b) Process improvement c) Self-managed team d) High Performing

10. What is considered a best practice when taking meeting minutes? a) Recording all details of the discussion for future reference. b) Stopping the discussion to flesh out

important points. c) The minute taker should be the primary project participant. d) Asking for clarification about important information if you need it.

Answer Key

1. **c) High Performing Team**
2. **c) Storming**
3. **b) Performing**
4. **b) Piggybacking**
5. **c) Discussion or evaluation of ideas**
6. **c) It allows for a "Swiss Army Knife Approach."**
7. **b) Using Agendas**
8. **c) They engage in data collection and problem solving.**
9. **b) Process improvement** (Derived from the source Q&A: A team finding faster ways to improve flow for quick results fits the description of process improvement.)
10. **d) Asking for clarification about important information if you need it.**