The 5S-KAIZEN-TQM approach training materials

What is Quality Management System (QMS) in healthcare?

Japan International Cooperation Agency

Fujita Planning Co., Ltd.

Objectives

At the end of the lecture, the participants will be able

- To explain about Quality Management System
- To explain about difference between QIS and QMS
- To explain about benefits of QMS
- To explain about Quality Management System in healthcare
- To explain about Key elements to measure Quality Management in Hospitals

Background

- Since the publication of *To Err Is Human* in 1999, improving the quality and safety of healthcare services has remained a major challenge for the healthcare industry.
- To address this challenge, the sector has adopted and adapted many approaches originally developed in the industrial field.
- Over the past decade, the concept of quality management in healthcare has evolved from being primarily service-provider-oriented (QC, QA, QI) to incorporating a patient-centered perspective, leading to a more comprehensive approach to quality management (QM).

What is “Quality Management” in healthcare ?

What is “Quality Management” in healthcare ?

- In healthcare, quality management refers to the administration and design of systems, policies, and processes that minimize—or ideally eliminate—harm while optimizing patient care and outcomes.

- However, to implement and sustain quality management activities, it is essential to establish clear policies for quality management, create appropriate structures for QM implementation, and set standards and regulations to ensure that these activities are carried out systematically. To address these needs, the concept of the Quality Management System (QMS) was developed.

Differences between QI system and QM system

Quality Improvement (QI) System

A **Quality Improvement (QI) system** is a framework that helps organizations enhance their products or services to increase customer satisfaction. It provides a systematic approach to analyzing performance and implementing improvements.

Quality Management System (QMS)

A **Quality Management System (QMS)** is a formalized framework that documents the processes, procedures, and responsibilities required to achieve quality policies and objectives. It helps coordinate and direct an organization's activities to meet customer and regulatory requirements while continuously improving overall effectiveness and efficiency.

Source: https://asq.org/quality-resources/quality-management-system

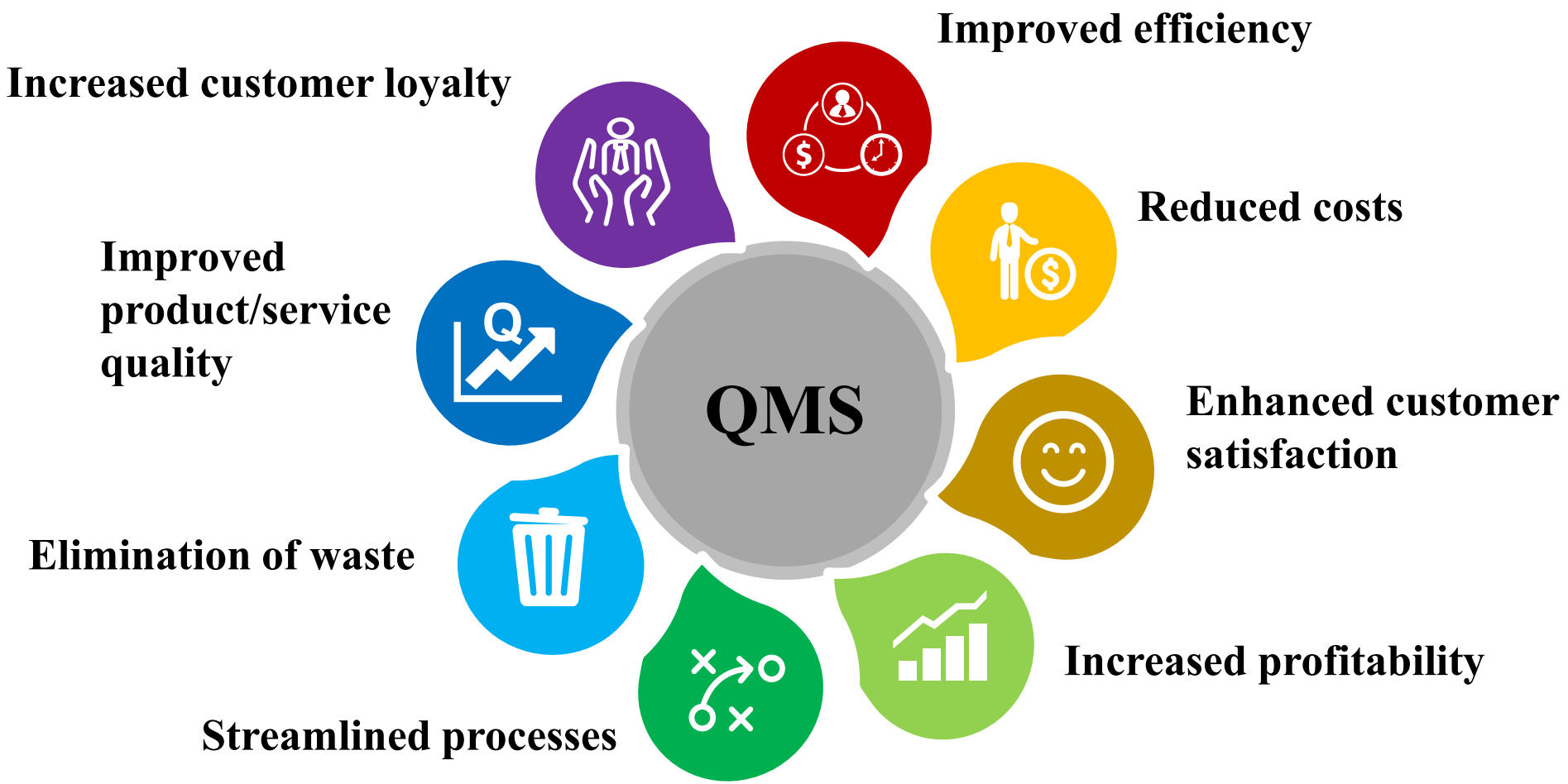
Benefits of QMS

Implementing a **Quality Management System (QMS)** affects every aspect of an organization's performance.
The benefits of a documented QMS include:

- **Meeting clients' needs and expectations**, which builds trust in the organization and results in increased clientele and greater utilization of services.
- **Meeting organizational requirements**, which ensures regulatory compliance and enables the delivery of services in a cost- and resource-efficient manner, thereby creating opportunities for expansion, growth, and profitability.

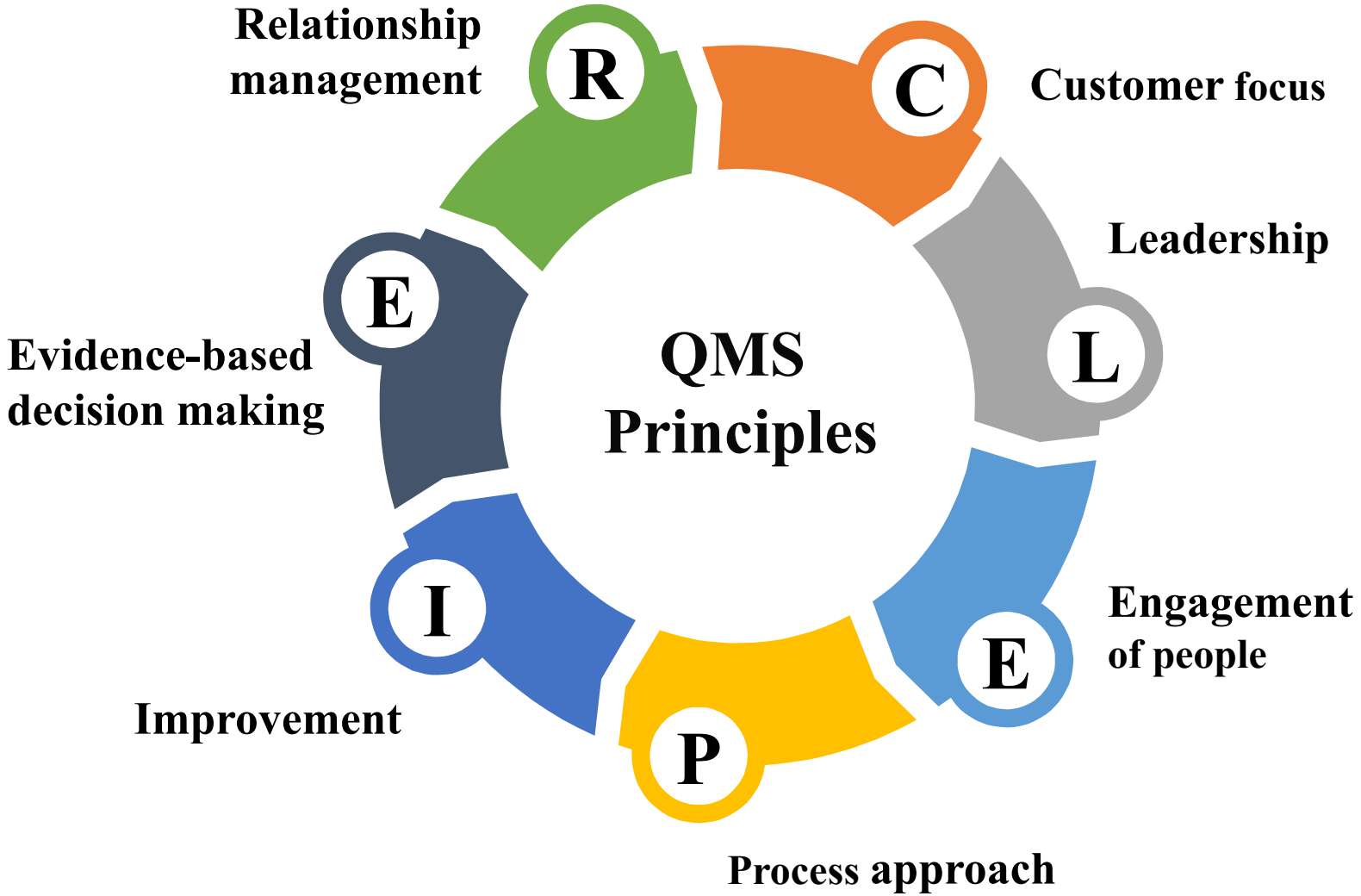
Source: https://asq.org/quality-resources/quality-management-system?srsltid=AfmBOorxrNHNiSH93VtSTaPTymjBD793u_To8_bMcex-xmgY9CfWpIWE

Benefits of Quality Management System



Source: https://www.6sigma.us/six-sigma-in-focus/benefits-of-a-quality-management-system/

Quality Management System Principles



Elements and requirements of a QMS

- Quality management systems should address an organization's unique needs; however, all systems share common elements, including:
  - The organization's quality policy and quality objectives
  - Quality manual
  - Procedures, instructions, and records
  - Data management
  - Internal processes
  - Customer satisfaction from service quality
  - Improvement opportunities
  - Quality analysis

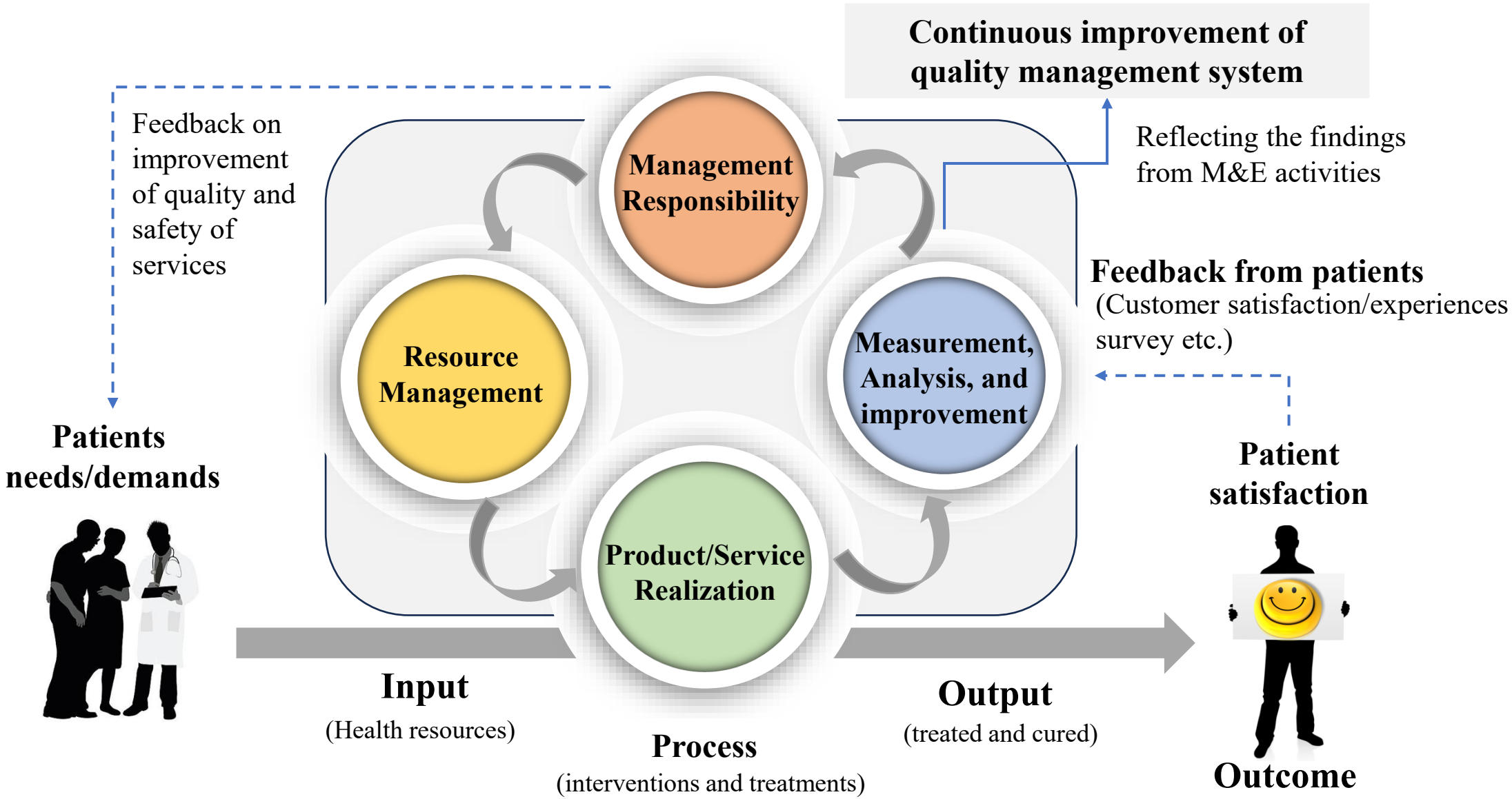
Source: https://asq.org/quality-resources/quality-management-system

Quality Management System in healthcare

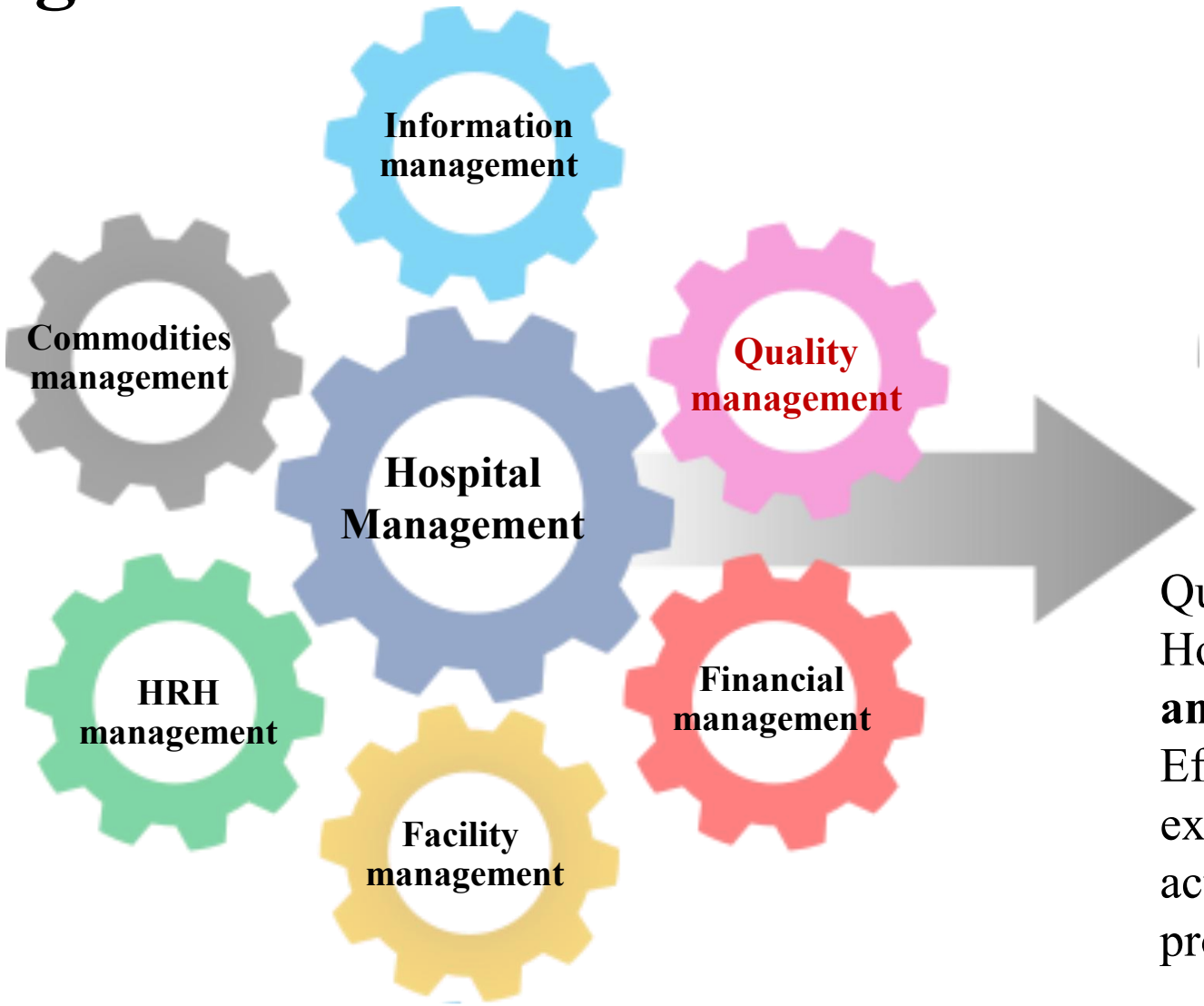
- The rationale for a **Quality Management System (QMS)** is to improve an organization's performance by facilitating more effective and efficient processes and by enhancing collaboration among healthcare professionals.
- A QMS can be described as the organizational structure, responsibilities, processes, procedures, and resources used to manage, assure, and improve the quality of care.
- Continuous improvement based on measured results is one of the fundamental elements of a management system. It involves the systematic monitoring and enhancement of care processes through the quality cycle and feedback mechanisms.

Source: https://www.nivel.nl/sites/default/files/bestanden/Quality-and-Safety-Management-in-Hospitals.pdf

Quality Management System in healthcare (Based on the ISO 9000)



“Quality management” is a part of health facility management”



Quality Management (QM) and Hospital Management are **inseparable and mutually reinforcing systems**. Effective hospital management cannot exist without strong QM, and QM activities cannot be sustained without proper hospital management structures.

Summary of linkage between Hospital management and Quality management

Hospital Management Function	Corresponding Quality Management Contribution
Governance & policy	Setting QM direction, establishing QIT/WIT system
Operational management	Process improvement through 5S-KAIZEN-TQM
HR management	Capacity building for quality skills
Resource allocation	Efficient use through waste reduction & standardization
Monitoring & evaluation	Data for decision-making and accountability

Key elements to measure QM in Hospitals

- Quality Management in hospitals is measured by evaluating governance, improvement culture, clinical safety, staff competency, efficient resource use, and data-driven decision-making

Element to measure on QM	What it Measures	Examples of Indicators
Governance & Leadership	Functionality of QM structure	QIT/WIT functioning, policies, meetings
5S–KAIZEN–TQM Implementation	Improvement culture	5S scores, KAIZEN projects, standardization
Clinical Quality & Safety	Care outcomes	IMMR, INMR, IPC compliance, safety indicators
HR Development	Staff skills & performance	Training coverage, supervision, skill tests
Resource & Environment	Efficiency of work systems	Stock management, equipment availability

Any question, comments, clarification you need?

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Establishment of QM implementation structure

Japan International Cooperation Agency

Fujita Planning Co., Ltd.

Objectives

At the end of the lecture, the participants will be able

- To explain about hospital structure and how to design it
- To explain what is QM implementation structure
- To explain how to build a team for QM
- To explain about roles and responsibilities of QIT
- To explain about difference between QIT and QIU/QMU

Background

- To carry out effective quality management activities, it is essential to establish a quality management (QM) implementation structure and ensure that it functions well within the hospital organization.
- Numerous academic studies have demonstrated that a team-based approach is effective in establishing such a structure.
- To make the structure functional within the hospital, it is necessary to assemble a team of skilled staff and manage it appropriately

Hospital structure

It refers to the relationships among divisions, departments, sections, and units within the hospital, including their respective responsibilities.

It can be defined as the power relations among managers, heads of departments, sections, and units

How to design structure?

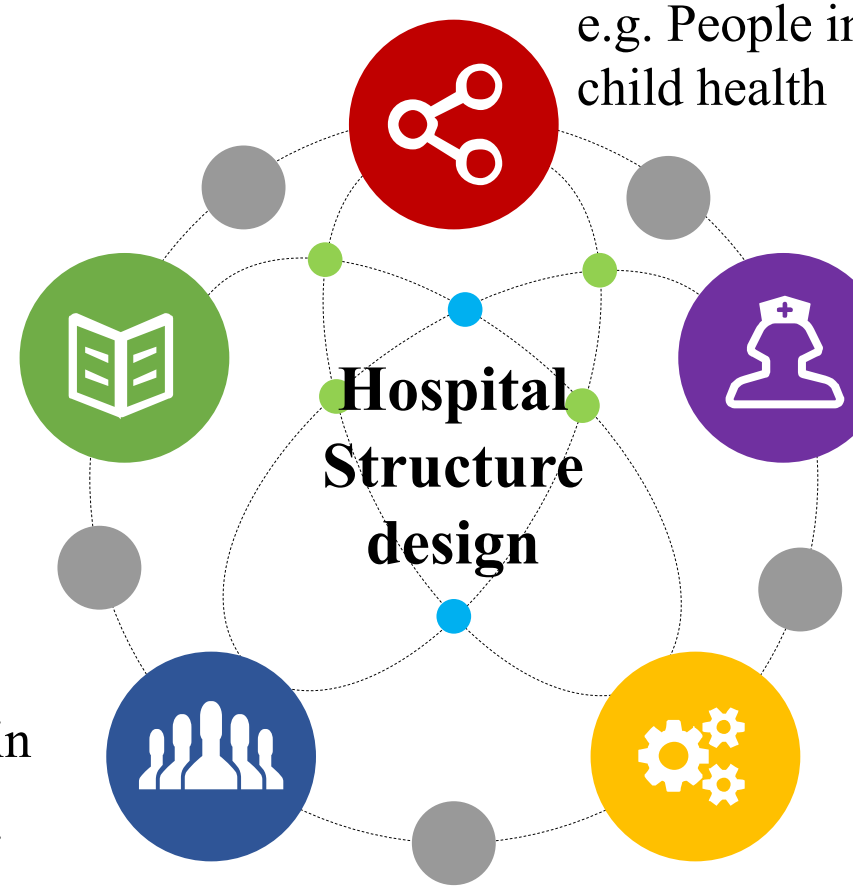
Structure can be designed it terms of :

Function

Grouping people who perform similar or closely related tasks
e.g. People in the maternal and child health

Purpose

Organizing people who are responsible for achieving a single purpose



Skills

Technical skills of individual healthcare workers to compose medical teams

Numbers

This means a certain number of people under one manager

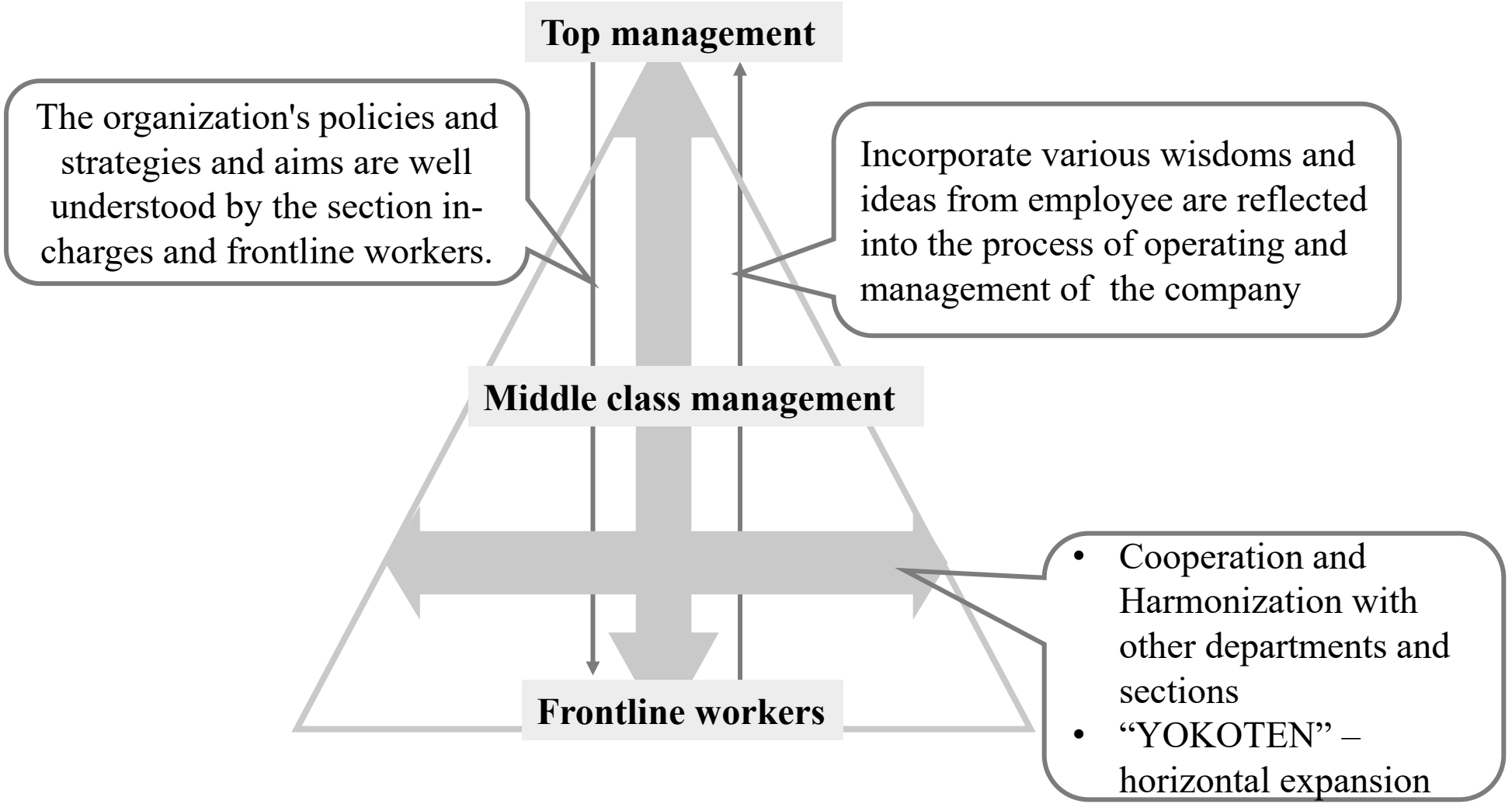
Technology

Technology that can be applied for patient treatment and care

Hospital structure is often categorized to

Category of Service	Sub Category of Service
Clinical Service	Care and Treatment
	Health Promotion and Disease Rehabilitation and Maintenance of patients with Chronic illness
Support Service within the hospital	Support Service within the hospital
	Support Service outside the hospital in collaboration with local health authorities
Research and Training	Training, Information management
Quality management	Quality management, Infection prevention, patient safety

Establish “QM implementation structure” on top of “Hospital structure”



QM implementation structure

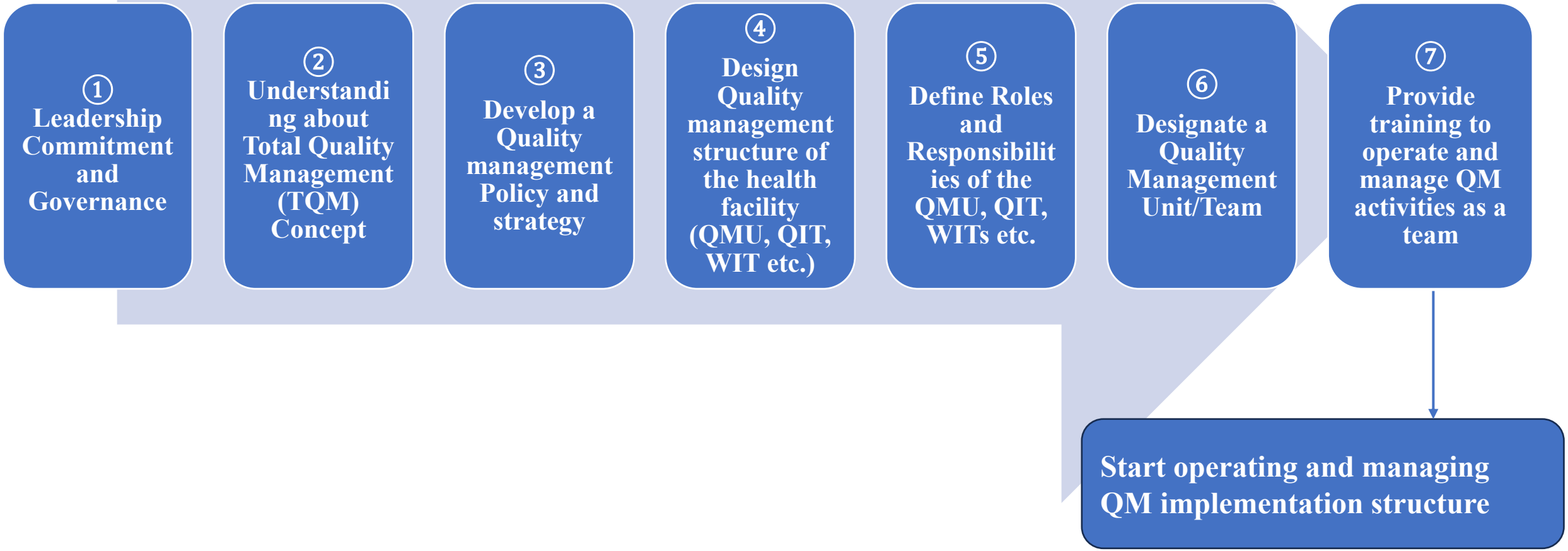
- QMS implementation structure is a systematic and structured approach to establishing and operating a QMS in hospital organization
- Team approach is effective to establish the implementation structure
- Quality management strategy and decision from Hospital management need to be well deployed to the department/section in-charge and frontline workers
- Line of commando, reporting and information sharing must be well established in the QMS implementation structure

How to guide the health facilities management for establishment of QM implementation structure?

- Guiding health facilities in establishing a Quality Management(QM) implementation structure can be difficult because of the following reasons:
  - Limited awareness and understanding of QM in healthcare
  - Lack of leadership commitment to QM in healthcare
  - Resource constraints
  - Weak organizational culture, including quality and safety culture – Inadequate training and follow-up on QM
  - Absence of a clear implementation framework

Preparation for establishment of QM implementation structure

Process for establishment of QM implementation structure



① Leadership Commitment and Governance

- Many academic and empirical studies have consistently shown that leadership is a critical success factor in the effective implementation of Quality Management (QM) activities in healthcare facilities.
- Lists leadership and governance as one of the key foundations for quality in health services, especially in maternal, newborn, and child health (WHO)
- Emphasizesthatexecutiveleadershipsupportisessentialtosustainlong-term quality improvement, especially through models like the Triple Aim. (Institute for Healthcare Improvement)

Why Leadership matters in QM Implementation

Leadership Role	Impact
Setting a clear vision and quality policy	Aligns teams and defines direction
Allocating resources (staff, time, budget)	Enables effective implementation
Driving a culture of safety and accountability	Encourages reporting and improvement
Removing barriers to change	Helps teams overcome resistance
Monitoring and rewarding progress	Keeps staff motivated and focused

②Understanding about TQM Concept

- Understanding the TQM concept is not optional but essential for building a strong, sustainable QM structure in healthcare. It shapes the philosophy, processes, team structures, and culture needed to deliver high-quality, patient-centered care.
- TQM provides a systematic approach that helps health facilities design a structured QM system based on principles like:
  - Customer (patient) focus • Employee involvement
  - Process orientation
  - Continuous improvement

③Develop a QM Policy and strategy

- Developing a Quality Management (QM) policy and strategy in healthcare facilities is essential to ensure that patient care is safe, effective, efficient, and continuously improving. Without a clear policy and strategy, quality initiatives tend to be fragmented, inconsistent, and unsustainable.
  - A QM policy defines the organization's commitment to quality, safety, and patient-centered care.
  - A QM strategy outlines how that commitment will be translated into action, setting goals, priorities, and responsibilities.

What are the benefits for development of QM policy and strategy?

Benefits of having QM policy and strategy	Explanation
Provides Clear Direction and Commitment	It provides clarity to all employees—regardless of their position—on the organization's commitment to quality and how their work fits into that mission
Enables Systematic Implementation of QM Activities	Without a strategy, quality improvement becomes reactive and ad hoc. QM strategy provides a structured plan for daily QM activities
Promotes Accountability and Measurement	A well-developed strategy includes Key Performance Indicators (KPIs) and performance targets. This makes it easier to track progress, identify gaps, and hold departments and leaders accountable for results.
Aligns with National Standards and Accreditation Requirements	It demonstrates that the facility has a structured, intentional approach to managing and improving care quality.
Supports Resource Planning	With a clear strategy, management can allocate staff, budget, and tools needed for effective quality improvement.
Builds a Culture of Continuous Improvement	QM policy establishes quality as a core organizational value. The strategy reinforces this by embedding improvement cycles like PDCA (Plan-Do-Check- Act) or root cause analysis into everyday operations
Improves Patient Trust and Outcomes	Patients and communities are more likely to trust a facility that demonstrates commitment to quality and safety.

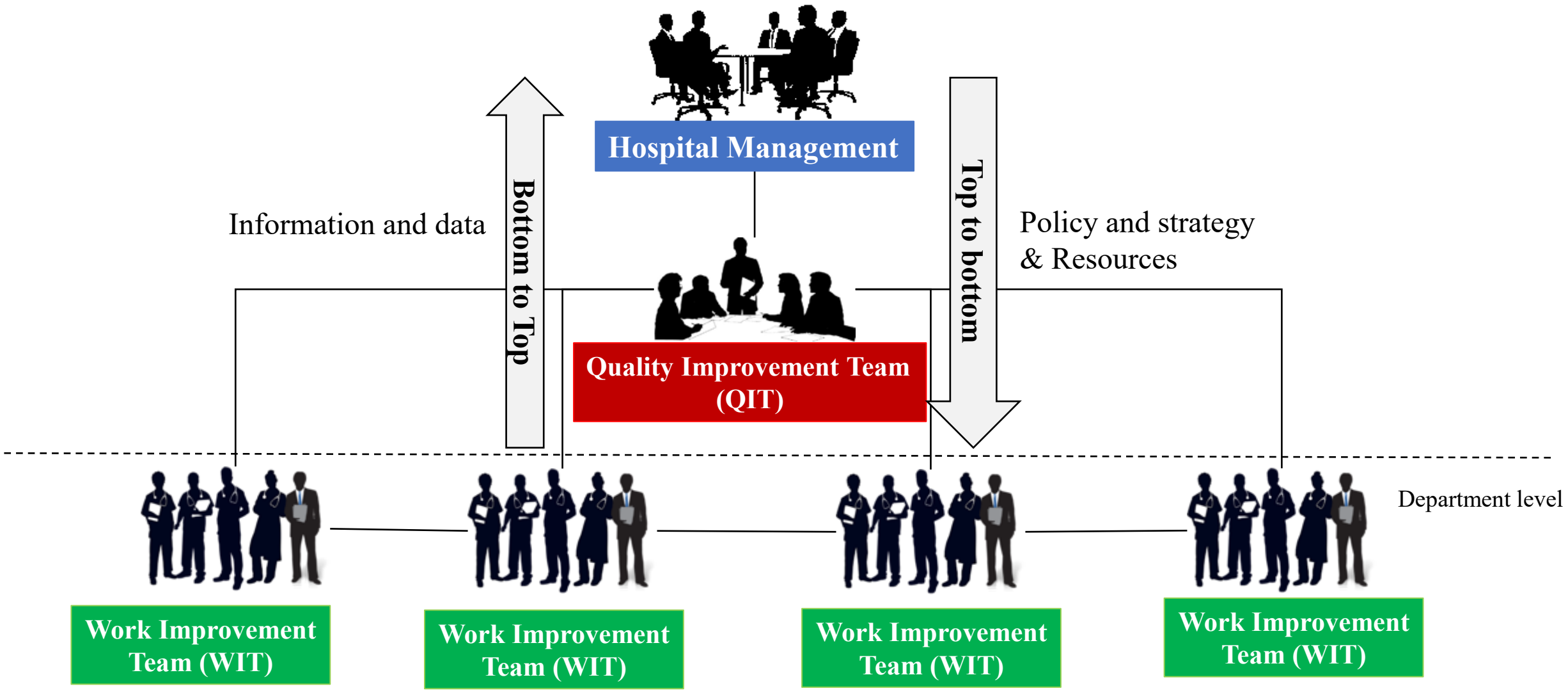
④ Design Quality management structure of the health facility

- Designing a Quality Management(QM) structure for a health facility involves establishing an organized framework that ensures systematic planning, implementation, monitoring, and improvement of healthcare services.
- To define the Quality Management(QM) structure in the hospital organogram, you must clearly position the Quality Management Unit (QMU) or Quality Improvement Team (QIT) and Work Improvement Team (WIT) within the overall organizational hierarchy.

Steps to Define QM Structure in the Hospital Organogram

1. Decide where the QM unit belongs
2. Name the unit clearly(QMU? QIT? etc.)
3. Specify the Line of commend and reporting line
4. Include key sub-committees or functions under QM
5. Use standard org chart format
6. Check the alignment with National QM guidelines

Example of QMS implementation structure in the hospital



⑤ Define Roles and Responsibilities of the QMU, QIT, WITs etc.

- Defining the roles and responsibilities of the QMU or QIT, and WITs is crucial for the success of Quality Management in health facilities because;
  - Everyone knows what they are responsible for and how they contribute to quality management.
  - Clear roles create a structured flow of information among HMT, QIU and WITs
  - It's easier to Assign ownership for tasks, Track progress and Evaluate performance
  - Allow QI processes (like PDCA, 5S-KAIZEN, clinical audits) to be implemented consistently
  - When staff change, new members can quickly understand their roles and continue QI work

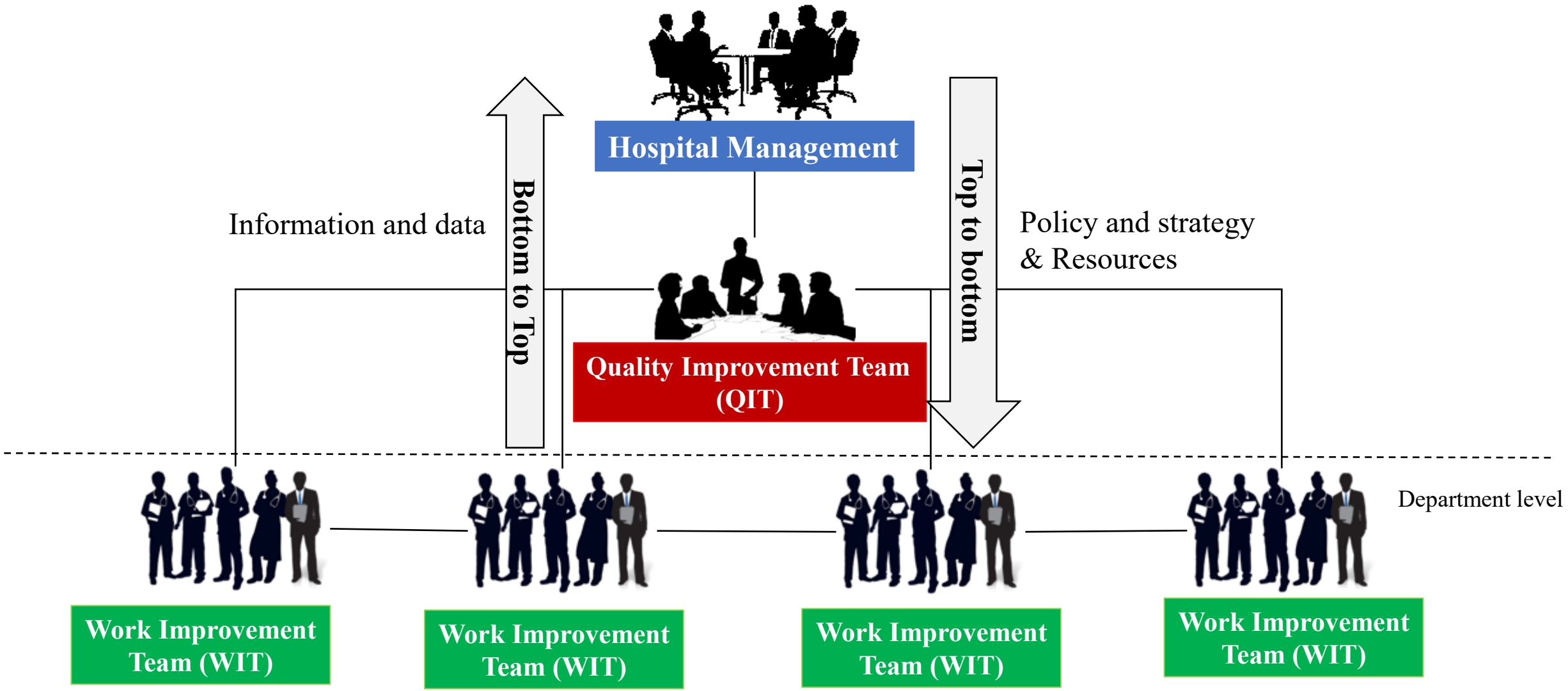
⑥ Designate a Quality Management Unit/Team

- Setting up a QMU or QIT in the hospital and WITs in each department or section requires a clear plan, strong support from hospital management, and good communication among stakeholders.
- Having clear criteria for selecting the members of each team helps promote the effective functioning of the teams
- After establishing the team, it is necessary to clearly define what must be done to ensure its proper functioning. To achieve this, education and training on quality management should be conducted, followed by post- training follow-up, technical support for team activities, and regular communication.

⑦ Provide training to operate and manage QM activities as a team

- Since relatively few staff have received proper education and training on quality management activities in healthcare facilities, it is important to understand what kind of knowledge and skills are required to be QMU/QIT and WIT members
- Develop a training program in collaboration with national facilitators based on the needs assessment.
- Develop a practical and impactful training program that blends theoretical instruction with hands-on activities.

Example of QMS implementation structure in the hospital



Establish and management of QIT/QIU

Key selection criteria for QIT members

- Positive mindset and strong commitment on QI
- Staff who Is willing to learn from other team members
- Staff who has influences on other hospital staff
- Staff has technical expertise on Quality Improvement
- Staff who commits to the success of the improvement project
- Good communication, good documentation and good teaching skills

Key roles and responsibilities of hospital management

Hospital managers have a responsibility to help ensure that QM activities are carried out in a sustainable manner

- Develop and deploy hospital policy and strategy on QM activities.
- Support QIT and WITs financially to implement QM activities
- Allocate human resource and other necessary resources for implementation of QM activities
- Communicate with QIT on QI activities regularly to provide managerial and technical inputs

Key roles and responsibilities of QIT

QIT oversee the quality management activities in the health facility

- Develop annual QM plan and budget, and submit to health facility management
- Coordinate all QM activities to ensure the effectiveness of the activities
- Train hospital staff on QM activities
- Conduct situation analysis for implementing any QM activities
- Implementing QM activities for solving common problems of the hospital
- Conducting periodical monitoring and evaluation, and provide technical advice to WITs for further improvement
- Keep all record and archives of all QM activities conducted in the hospital
- Allocate resources in effective and efficient manner for QM activities

Scope of QIT activities

The team may address organizational efficiency, cost effectiveness and the general wellbeing of the clients. Key scope are as follows;

- Quality of services
- Patient and staff safety
- Reliability of services
- Process management and improvement
- Reducing operating cost
- Reducing re-work
- Efficiency of job performance
- Improvement of communication
- Internal monitoring
- Working environment improvement

Photo source: https://www.cooleaf.com/blog/team-building-activities-for-healthcare-workers

https://www.ruralcenter.org/sites/default/files/rhpi/help/QI%20Team%20Process.pdf

QMU formulation

- Establishment of formal structure for QM activities seem more effective for “Sustainability” of QM activities”.
- Therefore, it is strongly suggested to establish **Quality Improvement/Management Unit (QIU/QMU)** rather than QIT**.**
- QIU should be a part of the facility organogram under the HMT with the allocation of **fulltime officers**.
- This structure changes the management of QM activities through the allocation of full-time staff and regular budget allocation to focus on all QM activities in the health facility in sustainable manners.

Experiences from Tanzania: QIT to QIU (1)

At the initial stage of introducing 5S-KAIZEN-TQM activities into the health facilities, establishment of Quality Improvement Team was instructed to the target health facilities. However, it is difficult to continue operating quality improvement team, and many health facilities had to restructured their quality improvement team.

QIT members had to engage in quality management work in addition to their original tasks. Therefore, it was difficult for the members to concentrate on QM activities and they were unable to continue their activities.

No regular QIT/WIT meetings	**Failure to continue 5S-KAIZEN-TQM activities**	**No regular supportive supervision**

Experiences from Tanzania: QIT to QIU (2)

MoH instructed to the government hospitals to establish Quality Improvement Unit (QIU) and allocate full time officers to deal with quality management activities in a hospital.

- All RRHs had established quality improvement units
- It was found that 96.4% of respondents' plans incorporated 5S-KAIZEN activities.
- Quality management work is well implemented and reported regularly and monitoring and supervision of 5S-KAIZEN activities are regularly carried out.

Difference between QIT and QIU/QMU

	QIT	QIU/QMU
Selection of members	Nominated by the management or voluntary with multitask activities	Appointed with specific roles and responsibilities
Member allocation	Part time weak concentration	Fulltime allocated personals
Participation	Occasional participation or Irregular participation	Full participation
Operation	Task oriented	Strategic oriented /planning
Status in the facility	Not necessary included to the hospital organogram	Included to the hospital organogram
Budget allocation	Partial or no budget for activities	Activities budgeted
Reporting to management	Not Answerable	Answerable
Intervention	Ad hoc implementation	Planned activities
Management of Quality	Selective implementation of Quality activities	Easy to oversee all Quality issues

M&E activities by QIT/QIU

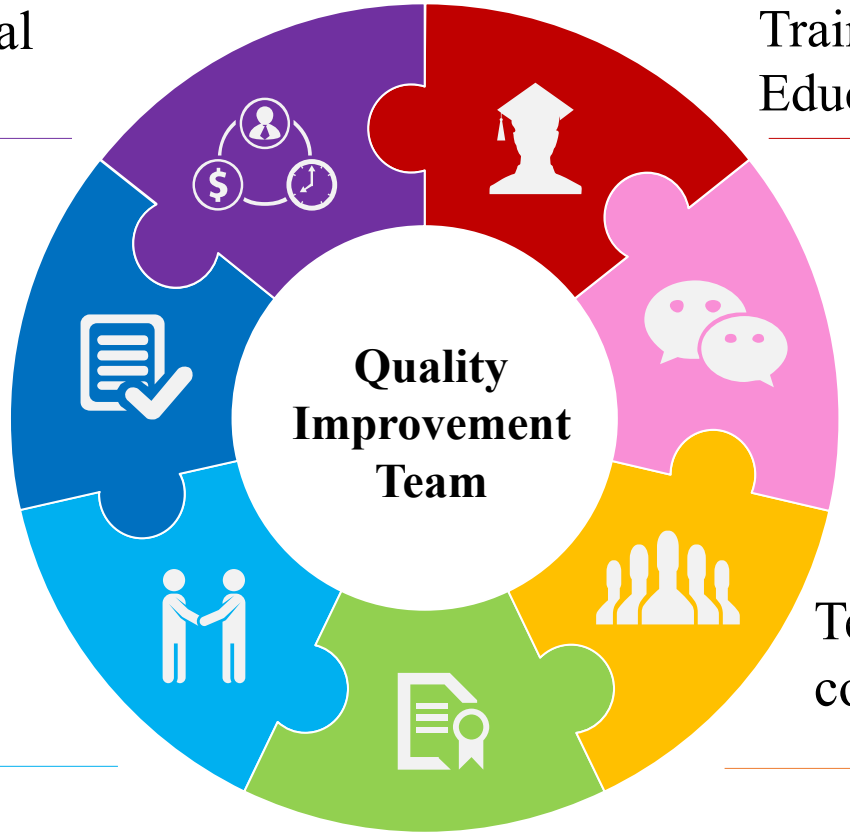
- **Facility Quality Planning** by QIT/QIT

- Reflect the findings, suggestions and recommendations from evaluation results

- **Quarterly Monitoring** the progress of 5S-KAIZEN activities by HMT and QIT/QIU

- **Evaluation** of the achievement of planned activities by QIT/QIU
- **Evaluation** of the progress of 5S-KAIZEN activities by QIT/QIU

Potential factors that influenced the performance of the QI teams



Support form Hospital management

Training and Education

Self assessment and learning

Communication

Team cohesiveness

Team size and composition

Clarity of roles and responsibilities of team

Godfrey Kacholi et al. PAMJ - 38(223). 26 Feb 2021
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8140683/pdf/PAMJ-38-223.pdf.

Establish and management of WITs

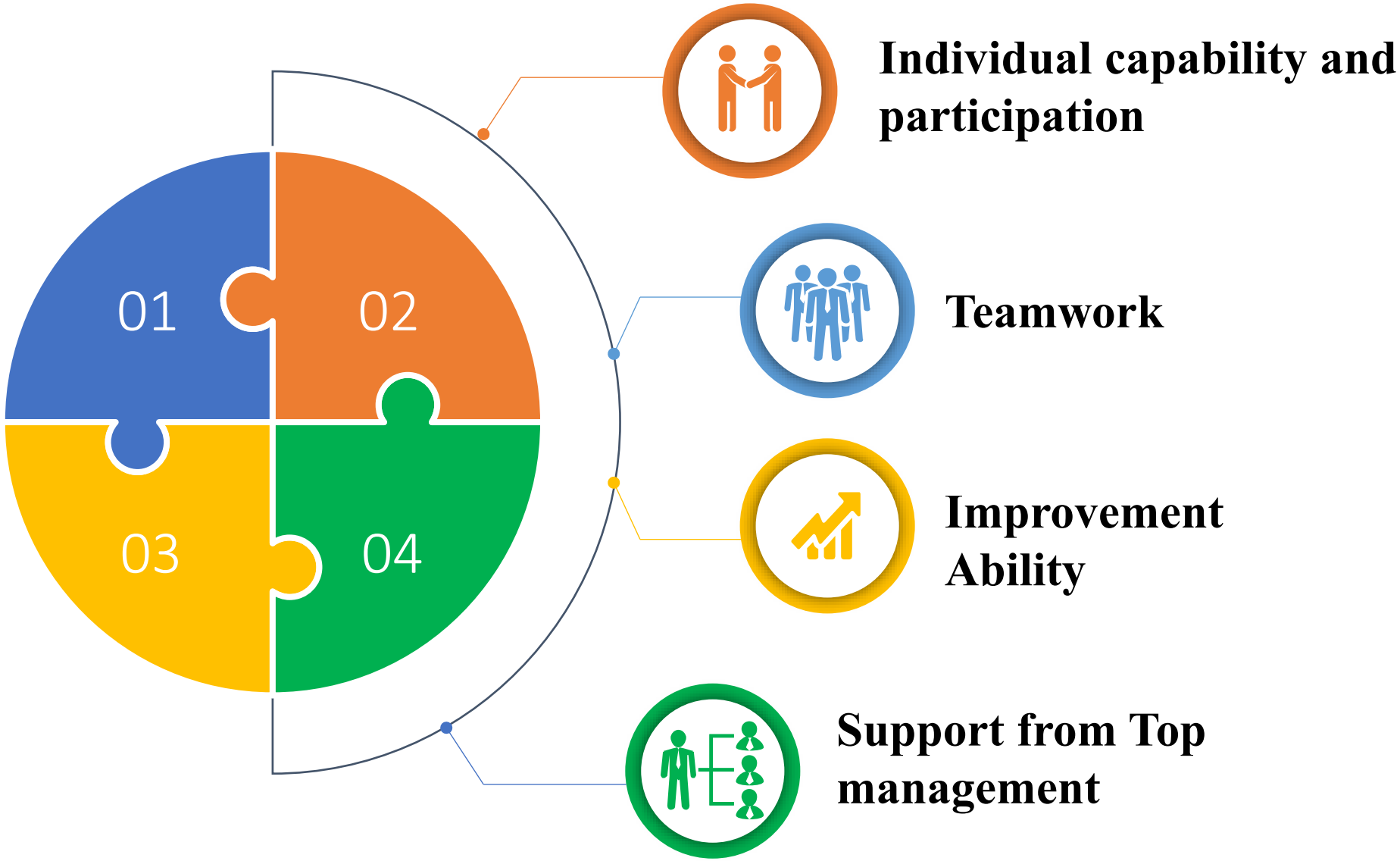
Background

- For the Quality Improvement Team, which is responsible for supervising quality management activities within a health facility, it is difficult to carry out day-to-day quality management activities at the individual department or section level.
- In order to properly implement quality management activities in the clinical setting, it is necessary to establish on-site teams responsible for daily quality management.
- For these reasons, it is recommended to establish Work Improvement Teams (WIT) at the department or section level to carry out quality management activities.

What is Work Improvement Team (WIT)?

- A Work Improvement Team (WIT) is a small team of staff members who meet regularly to solve problems related to their job scope or workplace.
- It is a group of people working together to achieve a common goal for which they share responsibility.
- WITs work on the premise of continuously improving ongoing processes within the department or section.

The four elements for making up the WIT



Aims of establishing WIT

- They are essentially employee-based small group activities.
- Aims of establishing WIT are;
  - To provide staff with opportunities for meaningful involvement;
  - To motivate and encourage health workers Contribution and challenge;
  - Bottom line results-higher quality outputs and service; and
  - Improved productivity

WITs seek to effect qualitative improvements in the following areas:

- Service to the customer / public
- Inputs, outputs
- Use of resources
- Procedures, workflow, systems, methods
- Work environment
- Workload management
- Coordination
- Safety
- Efficiency and effectiveness
- Skills and knowledge

Roles of WITs

- Leads the WIT and involves team members in solving problems or bringing about improvements relevant to the team's work
- Works closely with the facilitator in projects undertaken by WIT
- Attend meetings regularly
- Share and contribute ideas, effort and time to help and improve the team's effectiveness
- Cooperate with and help team leader and others
- Participate in problem-solving activities of the group
- Effect improvements arising from projects carried out by the team

Responsibilities of WITs

- **WIT is responsible for implementing routine quality management (QM) activities within its own department or section to ensure the provision of quality and safe services.**
  - Develop QM action plan annually
  - Orient newly assigned staff to the QM activities of the department/section.
  - Implement routine QM activities in the department/section.
  - Share and contribute ideas, effort, and time to improve the team's effectiveness within the department/section.
  - Conduct regular monitoring and evaluation of daily QM activities.
  - Document all QM activities in the department/section and share the monitoring and evaluation (M&E) results with other staff and the Quality Improvement Team (QIT).
  - Maintain regular communication with the QIT.

How to establish WITs? (1)

- Work Improvement Teams (WITs) are established to improve on-site (“genba”) operations and management. Therefore, they need to be formed at the department, section, or unit level within the organizational structure of healthcare facilities.
- WIT members are selected from the staff within the department or section/unit where the WIT is established. The number of members depends on the size of the department or section/unit; however, a team of 4 to 6 staff members is generally considered appropriate.
- Regarding quality management activities in healthcare facilities, WITs in each department or section are supervised by the Quality Improvement Team (QIT).

How to establish WITs? (2)

Processes of setting up WIT are as follows;

1. Select a knowledgeable and diverse group of people
2. Set clear roles and responsibilities of the team
3. Establish expectations and goals for the team
4. Educate and train the selected team members on WIT operation and management, basic QM topics and 5S-KAIZEN techniques
5. Monitor and supervise the team regularly

Reference: https://www.jotform.com/blog/process-improvement-teams/

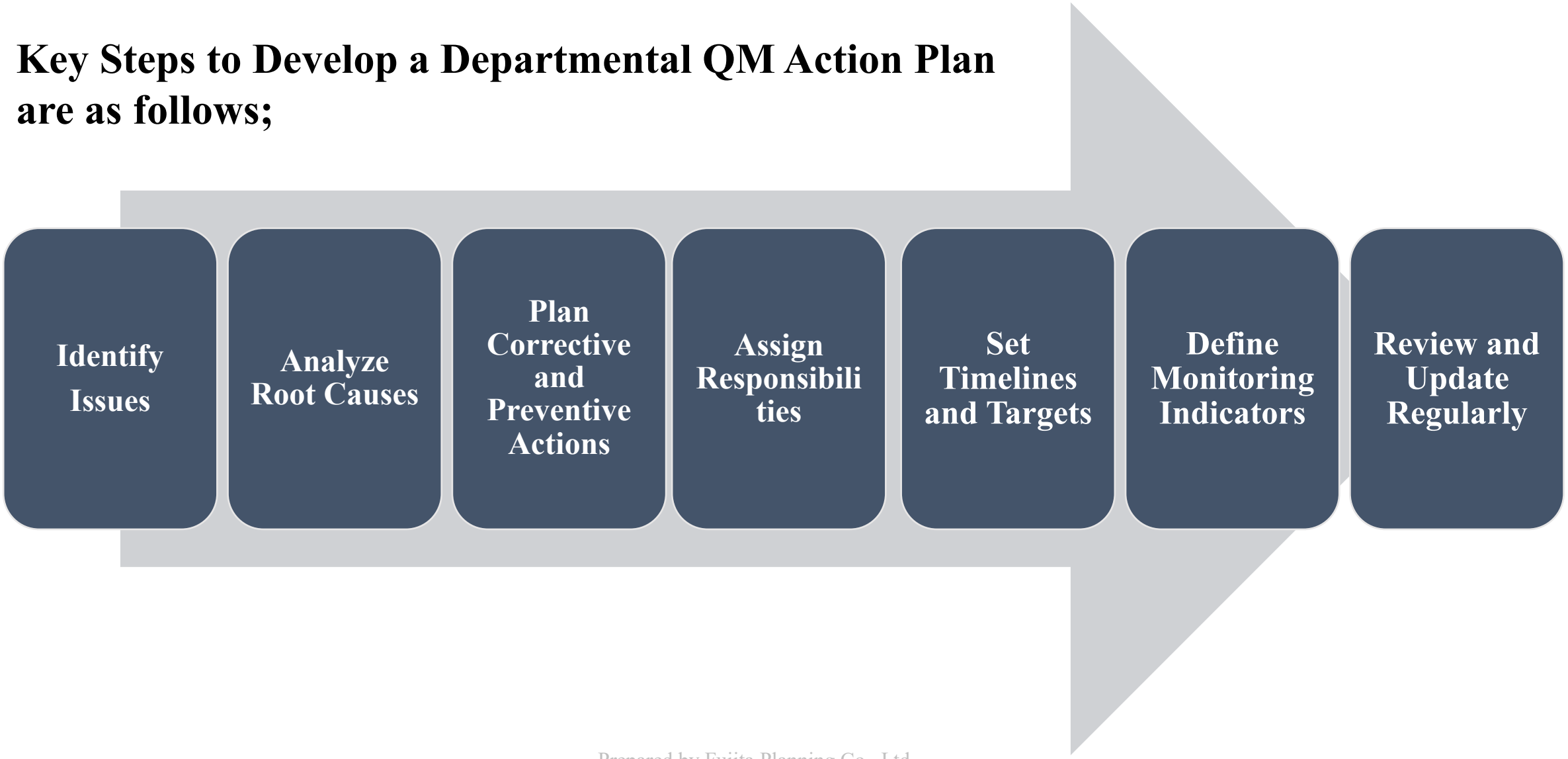
Selection criteria for WIT members

- Staff has technical expertise on Quality Improvement
- Staff who can show "Day to Day Leadership" within the department /section
- Positive mindset and strong commitment on QI activities
- Good record keeping skill
- Good communication and facilitation skills

Picture source: https://www.snhu.edu/about-us/newsroom/health/what-is-quality-improvement-in-healthcare

Departmental QM action plan

Key Steps to Develop a Departmental QM Action Plan are as follows;



Departmental QM Action Plan Template

Here is the example of QM action plan template;

Issue/Problem Identified	Root Cause	Planned Action	Responsible Person(s)	Timeline	Indicators for Monitoring	Remarks/Status
Delays in patient records	Incomplete documentation process	Standardize documentation procedure	Mr. A / Records staff	July 2025	% of complete records submitted on time	Ongoing

Please note that the QM action plan should be developed before the hospital operation plan, as it needs to be integrated and included in the hospital's budget

Daily Management of Service Quality by the WIT

- Conduct daily 5S activities to organize one's own workplace
- Implement KAIZEN activities
- Carry out quick KAIZEN initiatives to improve the workplace
- Apply KAIZEN using the QC story approach to solve workplace issues
- Ensure patient safety and staff safety
- Manage inventory of commodities, consumables, and medicines
- Handle complaints, suggestions, and needs appropriately

WIT meeting and QIT-WIT meeting

QIT - WIT meeting

WIT meeting

Frequency of meeting	Examples of what need to be discussed
Recommended: Monthly and as needed when issues arise	• Progress QM activities at the department and sections • Technical back-up and support needed • Internal monitoring and supervision results • QM activity report check
Recommended: Weekly and as needed when issues arise	• Progress of planned QM activities including KAIZEN QC story • Progress of daily 5S and quick KAIZEN activities • Complains from client • Issues arise

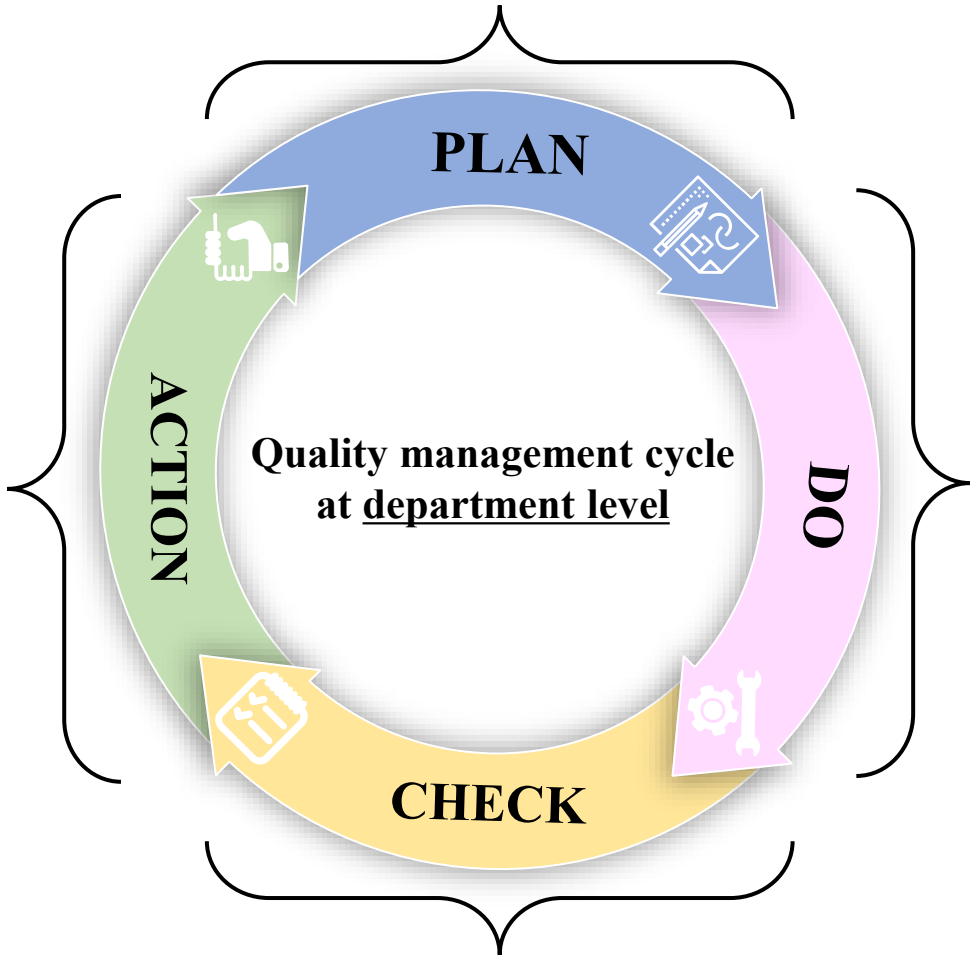
Monitoring and evaluation activities - WIT

Although the frequency of monitoring may vary, the following monitoring activities should generally be conducted by the Work Improvement Team (WIT):

	M&E activities	Frequency	Implemented by	M&E tools
1	**Self-monitoring** of 5S-KAIZEN activities	Daily	WIT	5S daily checklist
2	**Monitoring** the progress of planned activities	Quarterly	WIT	QI action plan
3	**Monitoring** the progress of 5S-KAIZEN activities	Quarterly	QIT+WIT	5S-KAIZEN M&E sheet
4	**Evaluation** of the achievement of planned activities	Annually	WIT	QI action plan
5	**Evaluation** of the progress of 5S-KAIZEN activities	Annually	QIT	5S-KAIZEN M&E sheet

M&E activities at department level

- **Departmental Quality Planning** by WIT



- Reflect the findings, suggestions and recommendations from evaluation results

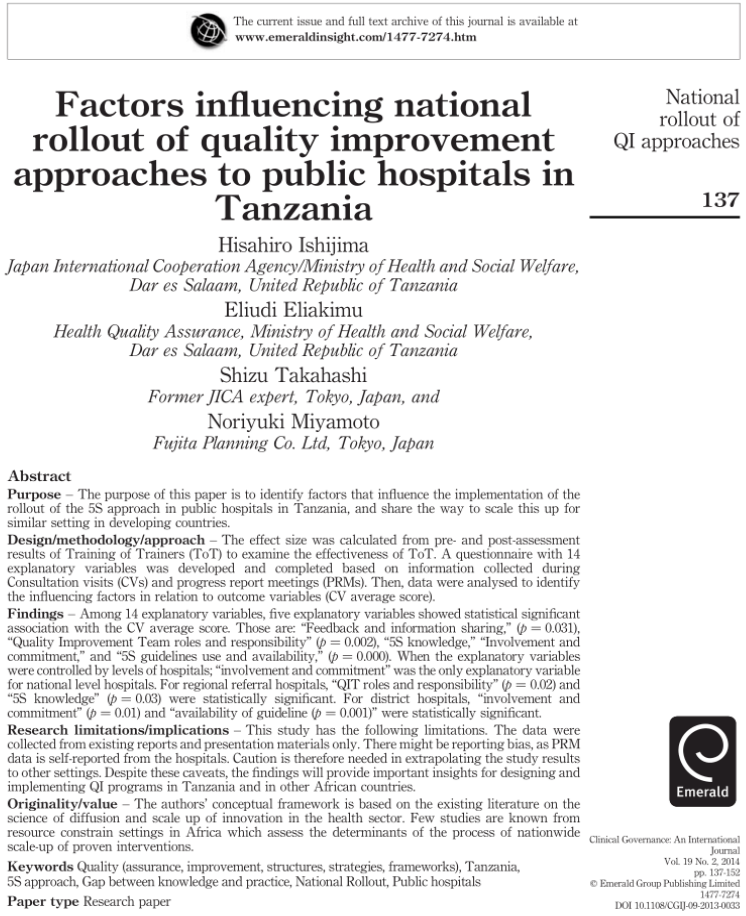
- **Quarterly Monitoring** the progress of planned activities by WIT
- **Quarterly Monitoring** the progress of 5S-KAIZEN activities by QIT + WIT
- **Daily Self-monitoring** of 5S-KAIZEN activities by WIT

- **Evaluation** of the achievement of planned activities by WIT
- **Evaluation** of the progress of 5S-KAIZEN activities by QIT

“Factors influencing national rollout of quality improvement approaches to public hospitals in Tanzania”

Ishijima. H et. al. (2014) Clinical Governance An International Journal 19(2)

- Roles and responsibilities of the QIT members need to be shared with all hospital staff, otherwise there will be resistance in implementation of 5S-KAIZEN-TQM activities among staff.
- Knowledge of the 5S-KAIZEN-TQM approach among sections in-charge (middle level managers) significantly influenced practice of the 5S-KAIZEN-TQM approach.
- Hospitals need to establish functional QIT with clear recognition, roles and responsibilities
- Not only top management, but also sections in-charge, are a key success factor of 5S-KAIZEN-TQM implementation, which is captured with the explanatory variables “involvement and commitment” and “knowledge on 5S” among sections in-charge.



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Factors influencing national rollout of quality improvement approaches to public hospitals in Tanzania

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Abstract

Purpose – The purpose of this paper is to identify factors that influence the implementation of the rollout of the 5S approach in public hospitals in Tanzania, and share the way to scale this up for similar setting in developing countries.

Design/methodology/approach – The effect size was calculated from pre- and post-assessment results of Training of Trainers (ToT) to examine the effectiveness of ToT. A questionnaire with 14 explanatory variables was developed and completed based on information collected during Consultation visits (CVs) and progress report meetings (PRMs). Then, data were analysed to identify the influencing factors in relation to outcome variables (CV average score).

Findings – Among 14 explanatory variables, five explanatory variables showed statistical significant association with the CV average score. Those are: “Feedback and information sharing,” ($p = 0.031$), “Quality Improvement Team roles and responsibility” ($p = 0.002$), “5S knowledge,” “Involvement and commitment,” and “5S guidelines use and availability,” ($p = 0.000$). When the explanatory variables were controlled by levels of hospitals; “involvement and commitment” was the only explanatory variable for national level hospitals. For regional referral hospitals, “QIT roles and responsibility” ($p = 0.02$) and “5S knowledge” ($p = 0.03$) were statistically significant. For district hospitals, “involvement and commitment” ($p = 0.01$) and “availability of guideline ($p = 0.001$)” were statistically significant.

Research limitations/implications – This study has the following limitations. The data were collected from existing reports and presentation materials only. There might be reporting bias, as PRM data is self-reported from the hospitals. Caution is therefore needed in extrapolating the study results to other settings. Despite these caveats, the findings will provide important insights for designing and implementing QI programs in Tanzania and in other African countries.

Originality/value – The authors’ conceptual framework is based on the existing literature on the science of diffusion and scale up of innovation in the health sector. Few studies are known from resource constrain settings in Africa which assess the determinants of the process of nationwide scale-up of proven interventions.

Keywords Quality (assurance, improvement, structures, strategies, frameworks), Tanzania, 5S approach, Gap between knowledge and practice, National Rollout, Public hospitals

Paper type Research paper

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Any question, comments, clarification you need?

The 5S-KAIZEN-TQM approach training materials

Human resource development and education for QM activities

Japan International Cooperation Agency

Fujita Planning Co., Ltd.

Objectives

At the end of the lecture, the participants will be able

- To explain about Consensus definition of QI education
- To explain about process on education and behavior changes
- To explain about Key critical issues on training employees
- To explain about how to train frontline workers on the 5S-KAIZEN-TQM approach
- To explain about monitoring and evaluation of training and education

Background

- In order to manage the quality of healthcare services, training and education for facility staff are essential.
- Training and education also have a significant impact on the sustainability of quality control activities.
- Training and education on quality management can be conducted either by an external team or by an internal team. However, it is strongly recommended to emphasize internal training to ensure sustainability.

Complains related with training and education

Training contents and information are not well shared from those who have attended the training to those who have not

Trained personnel are not well utilized after the training.

The action plan developed during the training is not supported by the workplace management.

There is no follow-up mechanism to ensure that trained personnel apply their acquired knowledge and skills effectively.

Consensus definition of QI education

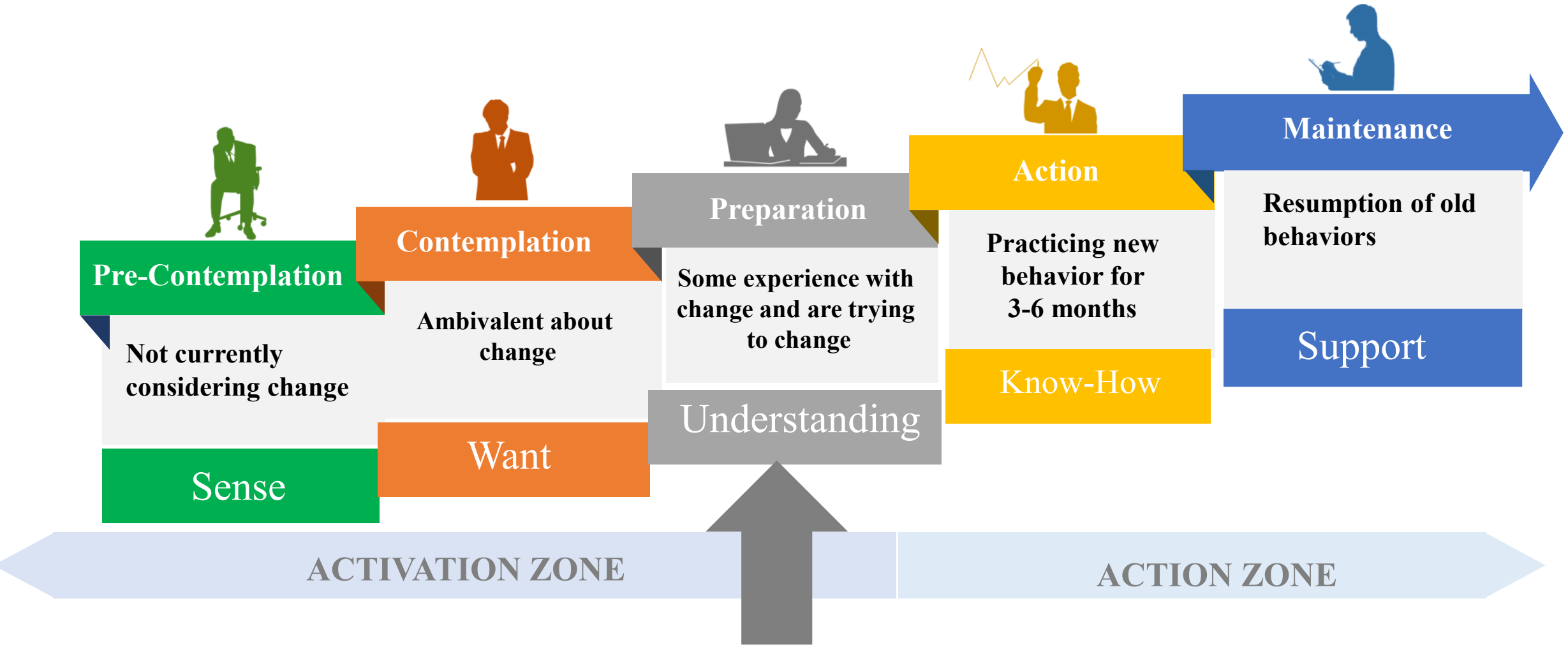
- Quality and safety culture cannot be cultivated without the education of health managers and health workers.
- Training health professionals in quality improvement (QI) develops their capability and resilience to put QI into action through the acquisition, assimilation, and application of：
  - knowledge in improvement science, systems and measurement
  - skills in managing complexity, leading change, learning and
  - reflection, and ensuring sustainability
  - training in human factors that impact capability
  - involvement of patients throughout the process.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6465816/
Future Hospital Journal 2016 Vol 3, No 3: 207–10

Education and Behavior change

Education is integral to clinical care; however, not all educational activities lead to behavioral change. Education is a broad concept that encompasses the acquisition of general knowledge, personal awareness, and practical skills. Although not sufficient on its own, education remains a necessary component for achieving behavior change.

Am J Lifestyle Med. 2018 Mar-Apr; 12(2): 113–116.
Published online 2017 Dec 9. doi: 10.1177/1559827617745479
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6124997/#:~:text=Education%20is%20ubiquitous%20with%20clinical,necessary%20component%20for%20behavior%20change.

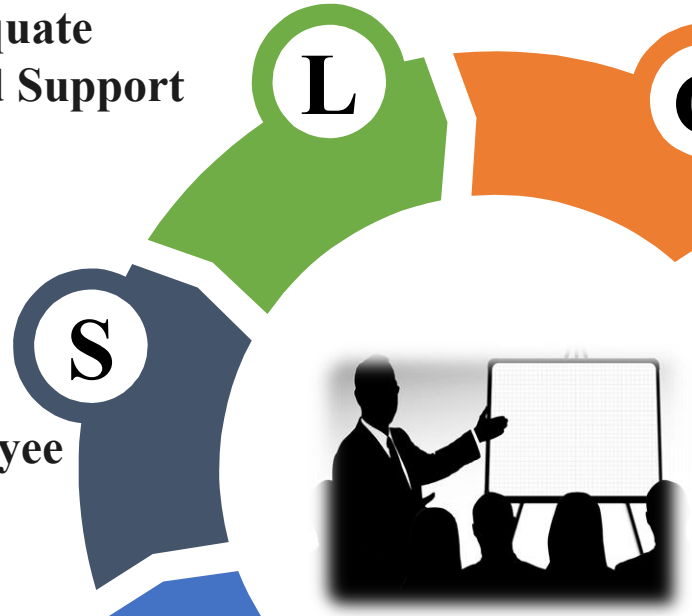


Training and education are effective in changing behavior when staff are seeking information and are willing to change their behavior.

“Cascade training mechanism”

		Expected participants	Who conduct
National level Training of Trainers (TOT)		Candidates of NFs, Facility managers, QIT /QIU members from target facilities	• Ministry of Health • Development Partners
Facility level Training of Trainers (TOT)		Department heads Section managers QIT/QIU members	• Hospital management • QIT /QIU of the hospitals • Who are trained in national level TOT
Facility staff training		Department and section staff	• Hospital management • QIT /QIU of the hospitals • Who are trained in facility level TOT

Key critical issues on training employees



Lacking Adequate Feedback and Support Systems

Overwhelming with Excessive Information

Encountering Workforce Resistance

Relying on Ineffective Training Methods

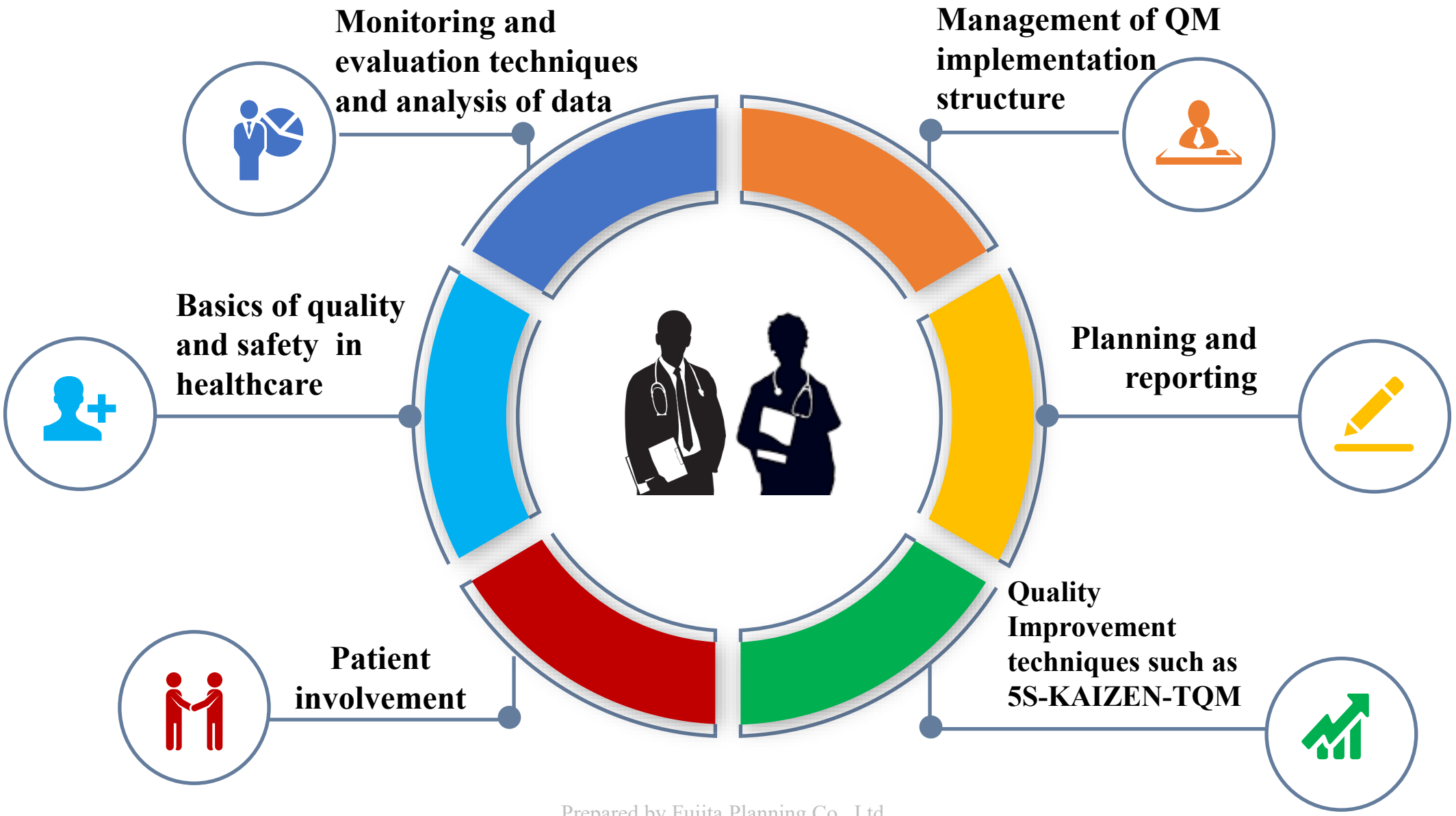
Neglecting Occasional Task Training

Facing Low Employee Engagement

Struggling to Overcome Employee Roadblocks

Source: https://www.edstellar.com/blog/employee-training-issues-and-solution

What do healthcare workers need to learn about Quality?



How to train frontline workers on the 5S-KAIZEN-TQM approach

Focused Training Objectives

Begin by establishing clear training objectives aligned with each 5S principle.
Organize the training into concise, easy-to-understand modules.

Length of Engagement

The length of training may vary; therefore, a structured approach with multiple sessions over several days or weeks is recommended.

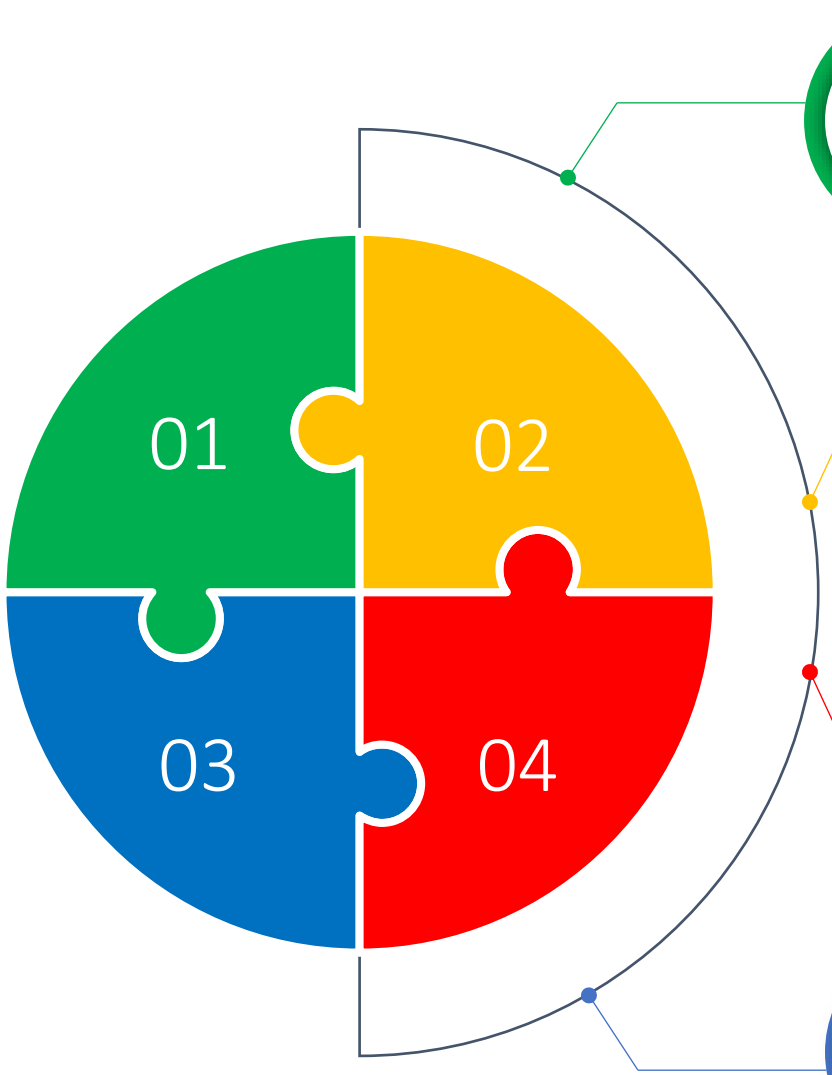
Hands-On Application

Encourage hands-on learning by incorporating practical examples from actual health facilities.

Continuous Support and Feedback

Provide continuous support after training, and establish a feedback loop that allows staff to share challenges and successes experienced during the implementation of 5S-KAIZEN-TQM

Training contents for Quality and Safety with 5S-KAIZEN-TQM approach



Basic contents of Quality and Safety

- Positive attitude
- Quality and safety culture
- Quality and safety in healthcare
- QMS structure
- Team budling
- Effective leadership

5S approach

- Basics of 5S approach
- Classroom practice of the 5S approach
- 5S tools and visual control
- S4 and S5 implementation

KAIZEN approach

- Basics of KAIZEN
- Quick KAIZEN
- What is KAIZEN with QC story?
- KAIZEN with QC story Step 1 ~7

Monitoring and Evaluation of QM and 5S-KAIZEN-TQM

Training design

- Training design refers to the process of developing a structured and effective training program for employees.
- It includes planning and organizing the program's content, structure, delivery methods, and evaluation to achieve the intended learning objectives.
- There are different way of designing training;
  - Based on the results of training needs assessment
  - Based on the results of problem analysis
  - Based on the set goal and objectives
  - Based on the daily work performance of staff
- When designing training, it is also important to consider effective training methods.
- When designing training, it is also important to consider the target audience.

Identify the training target audience

- Understanding the specific group of individuals who are most likely to benefit from technical skills training programs is crucial.
  The following points are important for identifying the target audience for training:
  1. **Demographics:** age, education level, professional background, etc.
  2. **Psychographics:** personal aspirations, learning preferences, and career goals.
  3. **Needs and skill gaps:** prevalent skill deficiencies and learning requirements.
  4. **Employment outcomes:** highlight successful employment outcomes of past participants.
  5. **Impact/influence on others:** consider the participant's potential to influence or support colleagues.

Preparation of training

- Training program/time table
- Facilitator allocation
- Teaching materials (PPT and text book)
- Training materials (stationary, projectors, flipchart etc.)
- Pre-Post- assessment questionnaire
- Course evaluation sheet
- Venue and catering/refreshment arrangement

Conducting a training

- Create an environment where participants can fully concentrate on the training.
- At the beginning of the training, establish and agree upon ground rules with all participants.
- Use effective teaching methods that promote understanding among participants.

Training evaluation

The following evaluation are necessary to be implemented;

Pre- and Post- test

It is to evaluate participant's knowledge,
attitude and skills before and after the training

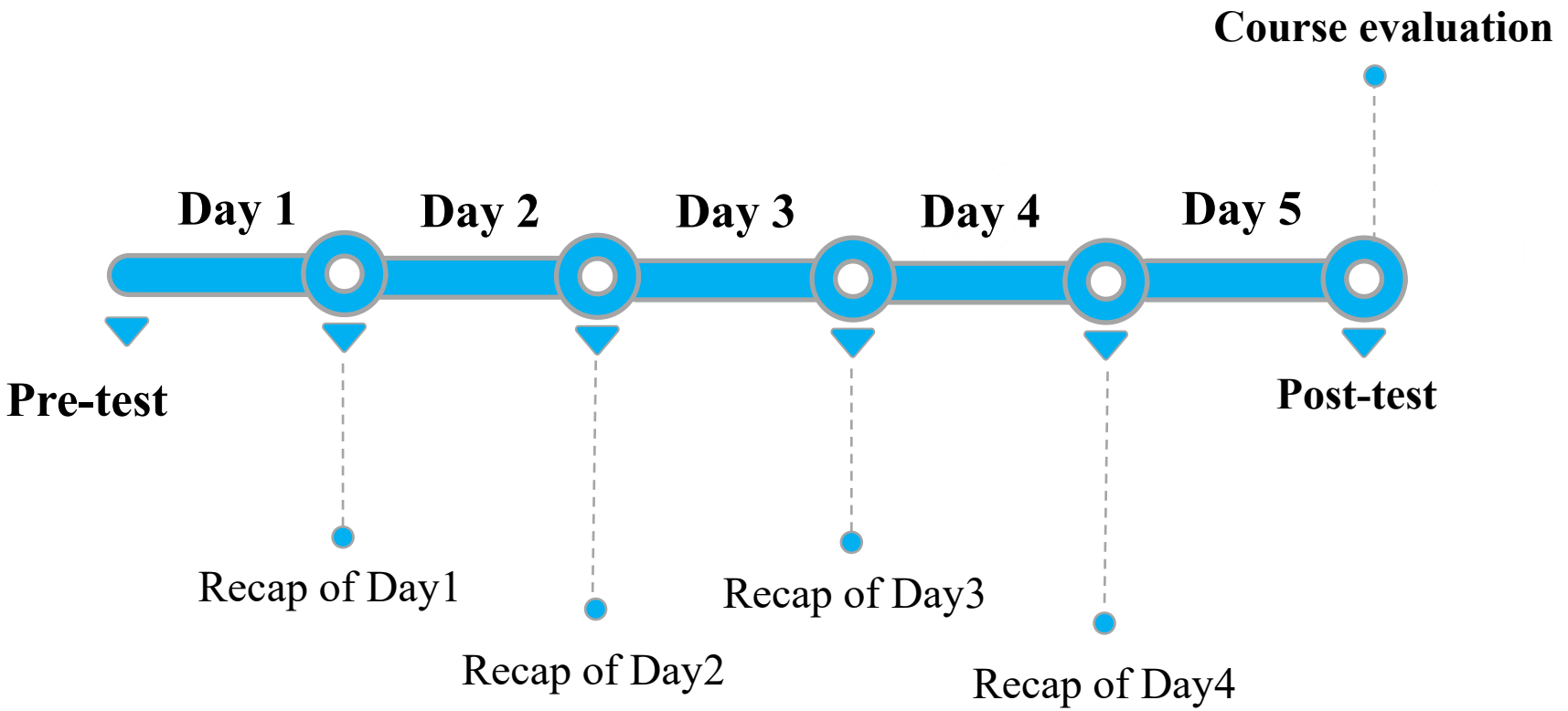
Daily evaluation

It aims to understand participants' level of knowledge retention and to identify any challenges or gaps in the training at the end of each day through a "recap of the previous day."

Training course evaluation

It is to understand participants' satisfaction with the training, the various training methodologies, challenges, and areas for improvement.

Timing of each training evaluation



Pre- and Post-test of training

- The training organizer will prepare a questionnaire that will take approximately 30 minutes to complete.
- Training participants take a pre-/post-test.
- The training organizer will score the results and calculate the standard deviation and median.
- The training organizer will use the calculate standard deviation and median to calculate “Effect Size (Glass’s Δ)".
- Please visit https://www.socscistatistics.com/effectsize/default3.aspx for free effect size calculator. Use Glass’s D result to report the effect size of the training.

Recap of daily activities

- At the beginning of the training, assign groups of participants to record their daily training activities.
- Each group will summarize the main points of the training activities on their assigned day and create a PowerPoint presentation.
- Each group will present a recap of the training activities the following morning.

Course evaluation sheet

- The training course evaluation sheet is a tool used to measure participants' satisfaction with the training.
- The course evaluation questions address not only satisfaction with the course content, but also aspects such as the duration of the training, the training environment, the convenience of the facilities, and the quality of meals provided.
- Course evaluations should be analyzed promptly after the training is completed, and the results should be reflected in efforts to improve the quality of future training programs.

Using the training evaluation results, it is possible evaluate the effectiveness of the training course

Evaluate the effectiveness of trainings

- Effectiveness of a training should be evaluated for CQI of a training
  - How much knowledge and skills the participants obtained
  - How much the participants were satisfied
  - What the participants could not learn
  - Whether the facilitators can contribute to learning process etc.
- Evaluation of the participants is not main purpose

Kirkpatrick's Four Levels of Evaluation

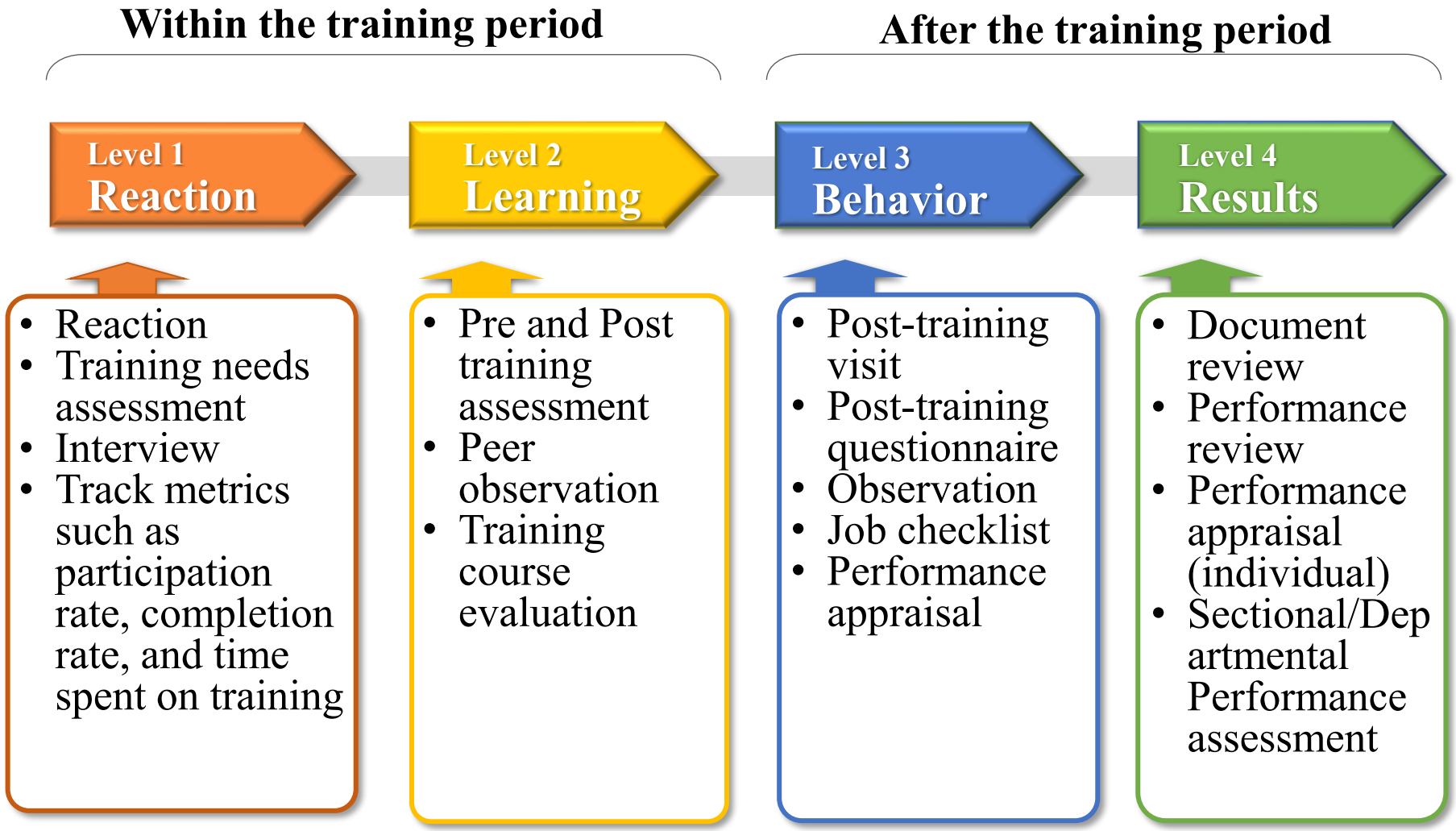
Within the training period

After the training period

Level 1 Reaction	Level 2 Learning	Level 3 Behavior	Level 4 Results
• Measure degree of fulfillment of participant's expectation • Measure satisfaction	• Measure how much knowledge and skills that participants obtained • Identify what the participants could not learn	• Observe how much attitude & intentions were changed • Evaluate by the mangers and/ or colleagues	• What and how much the actions impacted to organizational performance

Sources: https://www.kirkpatrickpartners.com/the-kirkpatrick-model/

How to evaluate?



Actual implementation of KP method

Pre-test

Training

Post-test and course evaluation

Questionnaire to trained personnel

Direct observation

Focus group discussion

Analyze the findings from interviews, questionnaire etc.

Interviews

Level 1 Reaction

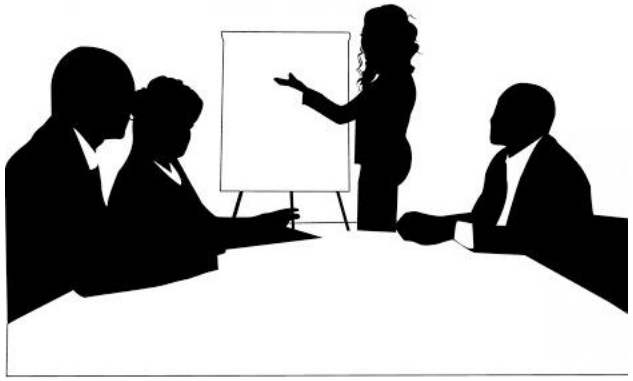
Level 2 Learning

Level 3 Behavior

Level 4 Results

Reporting and Analysis of KP method

1. **Analyze data from all levels:** Compile and interpret findings from each level, identifying strengths, weaknesses, and areas for improvement.
2. **Create a comprehensive report:** Present key insights and recommendations for future iterations of the training in a clear and concise manner.
3. **Share results with stakeholders:** Communicate findings to decision-makers, trainers, and participants to guide future training development and resource allocation.



Source: https://unstop.com/blog/kirkpatrick-model-of-training-evaluation-guide

Quote from Taiichi Ohno

Taiichi Ohno : 1912 – 1990
Former vice president of TOYOTA Motors
Father of Toyota Production System

- *When teaching workers how to do a job, don't ask them "Did you understand?" — ask "Can you do it?*

http://mike-shimada.c.blog.so-net.ne.jp/_images/blog/_3ea/mike-shimada/E382B9E382AFE383AAE383BCE383B3E382B7E383A7E38383E38388EFBC882014-05-11205.03.15EFBC89.png

Any question, comments, clarification you need?

The 5S-KAIZEN-TQM approach training materials

Planning, Operation and Management of QIT

Japan International Cooperation Agency

Fujita Planning Co., Ltd.

Objectives

At the end of the lecture, the participants will be able

- To explain about the QIT management cycle
- To define about Quality planning
- To explain about Why QP is essential
- To explain about how to operate and manage QIT
- To explain about how to monitor and evaluate the QIT function and 5S-KAIZEN activities

Background

- If a health facility does not have a dedicated department or unit for quality management activities, a common approach is to establish a Quality Improvement Team (QIT).
- However, because the majority of QITs do not have full-time staff—and those staff are drawn from various departments within the organization—most QIT members are involved in quality management (QM) activities on a part-time basis.
- Based on Ishijima's study (2014), if a QIT does not clearly understand its roles and responsibilities, its members will not perform well, and the QIT's functions will be weakened, negatively affecting quality improvement (QI) activities.

** Factors influencing national rollout of quality improvement approaches to public hospitals in Tanzania; Clinical Governance An International Journal 19(2), DOI:10.1108/CGIJ-09-2013-0033

Operation of QIT

- In order to carry out quality management (QM) activities effectively, it is important to establish a Quality Improvement Team (QIT) to systematically implement these activities. It is also essential to ensure the continuous and proper operation of the established QIT.
- To operate the QIT in an appropriate manner, it is necessary to formulate an annual operation plan and to develop various operational rules and regulations. In addition, education and training for staff who will serve as QIT members are required.
- The operation of the QIT should be regularly monitored and its performance periodically evaluated.

QIT management cycle

1. Quality Planning
The QIT should develop an annual or biannual plan for quality management (QM) in the health facility. Note that Work Improvement Teams (WITs) also need to develop plans for their own activities. Facility management should also consider allocating a budget for QM activities.

2. Implementation of Planned activities
All planned activities need to be implemented according to the timeframe given

- QIT/WIT meetings
- Internal monitoring and supervision

3. Evaluate the achievement of planned activities and outputs
Evaluate the achievement of planned activities and outputs at the end of the plan.

4. Review the entire process and activities, and analyze the evaluation results
Evaluation results should be thoroughly analyzed, and the findings should be used to inform subsequent quality improvement planning. Developing an annual report on quality management activities is essential for tracking progress and ensuring accountability.

Definition of Quality planning (QP)

Quality planning in healthcare involves identifying the quality needs, objectives, clinical standards, and service delivery requirements for a health facility, department, or care process, and developing a plan to achieve them. It requires a thorough analysis of patient and community needs, clinical guidelines, service utilization trends, care processes, and the organization's capabilities, resources, and systems.

Source of drawing: https://www.geeksforgeeks.org/features-importance-and-limitations-of-planning/

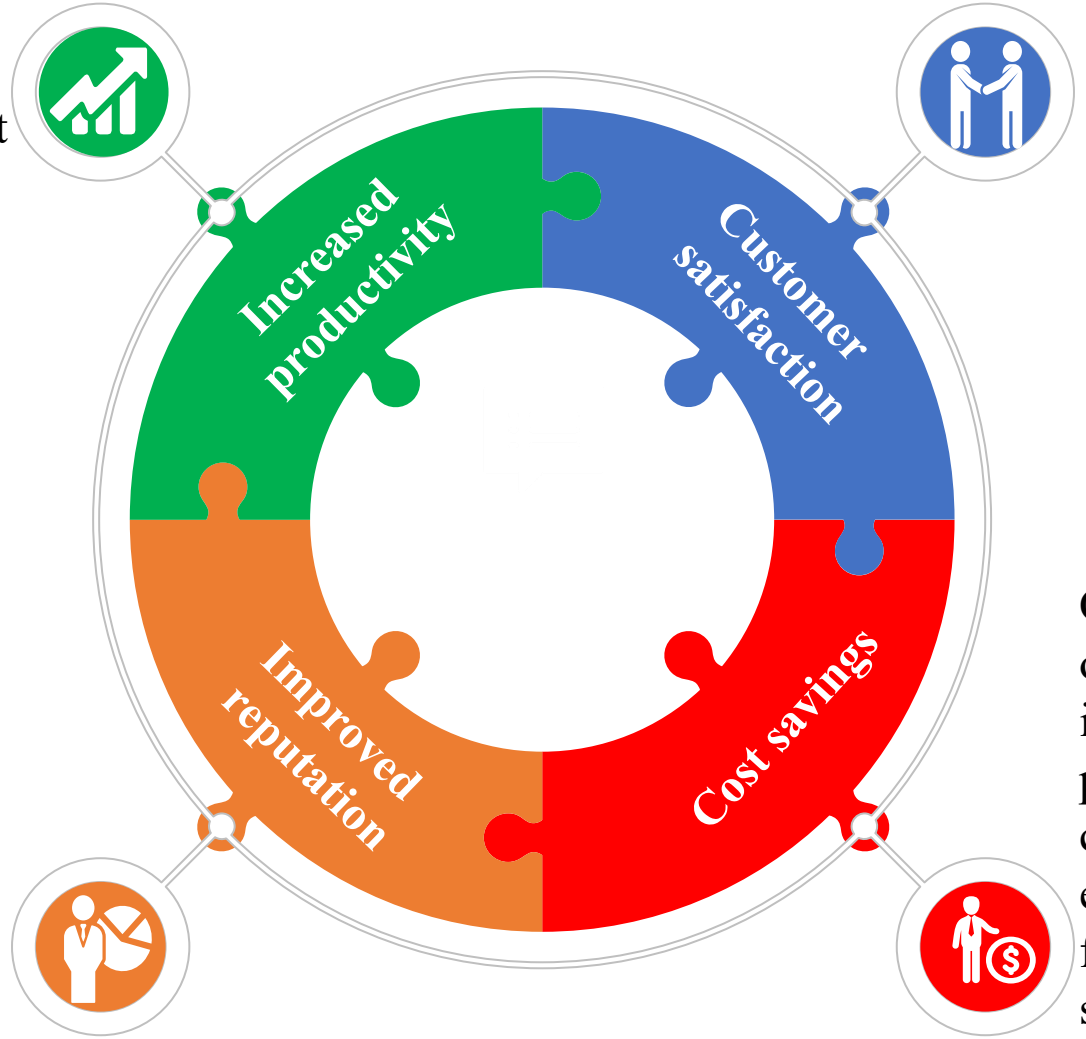
What is QP ?

- **Quality Planning (QP)** is an essential process in any health-care organization that helps ensure clinical and non-clinical services meet the required standards of care and patient expectations.
- QP forms the foundation upon which all hospital quality management systems are built. It involves establishing the necessary clinical processes, workflows, resources, and activities required to achieve the desired level of quality and safety in patient care and service delivery.
- Quality planning must be emphasized, as it helps health facilities minimize clinical and service delivery errors, reduce operational costs, improve patient satisfaction and experience, and ensure compliance with national clinical guidelines, regulatory requirements, and healthcare standards.

Source: https://uk.indeed.com/career-advice/career-development/quality-planning

Reasons why QP is essential

Quality Planning (QP) ensures that employees understand their roles and responsibilities and that processes are well defined. This helps improve mistake-proofing, eliminate waste, and increase productivity.



Providing quality services is essential to meeting customer needs and expectations. Quality Planning (QP) enables organizations to understand customers' requirements and deliver services that fulfill them.

Delivering quality products and services enhances an organization's reputation and strengthens customer loyalty. This, in turn, can lead to greater reliability and profitability.

Quality Planning (QP) helps organizations identify defects and issues early in the service provision process. This can save both time and cost, as addressing issues early is easier and less expensive than finding and correcting them after the services have been provided.

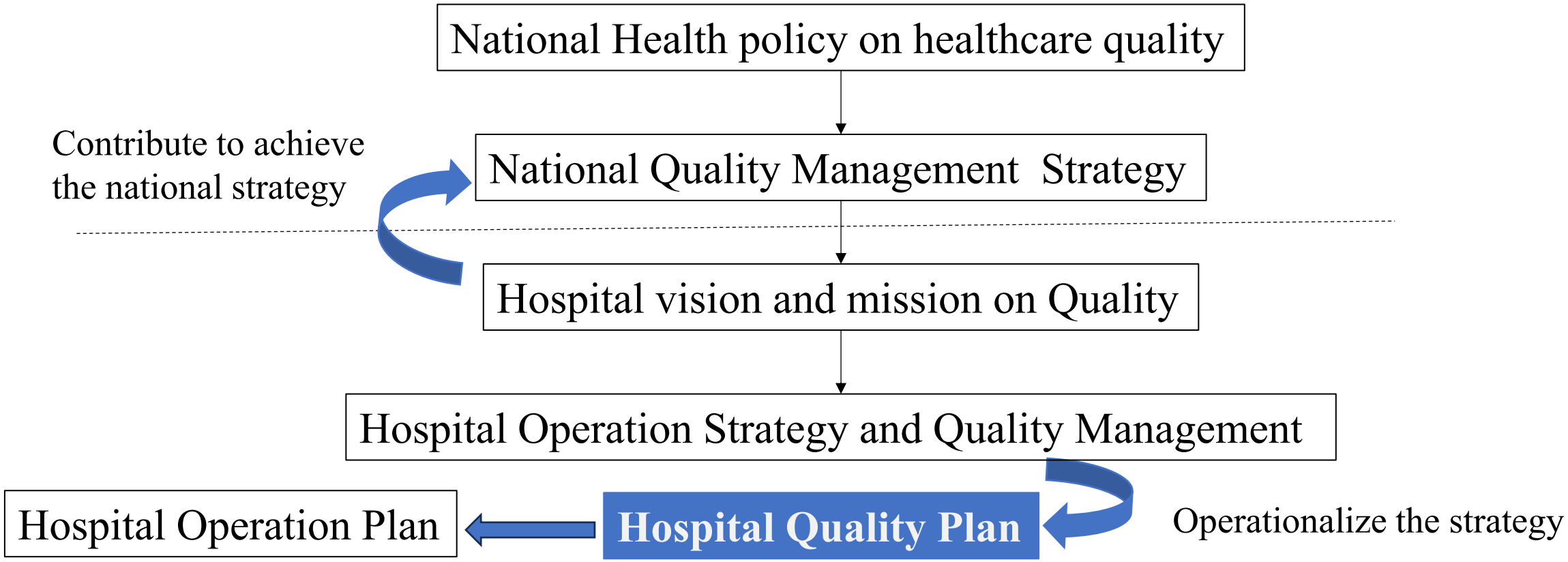
https://www.techno-pm.com/blogs/quality-management/what-is-quality-planning-and-why-it-is-important

Key benefits of Quality Planning

- It **brings** together the various skill sets required to carry out the work within the desired scope, size, cost, and quality — on time and within budget constraints.
- It helps **QIT members prioritize** the areas to work on.
- It enables stakeholder approval of changes needed during the implementation of the plan.
- It ensures that the planned activities are implemented on time; delays can be detrimental to the smooth flow of work.
- It **acts** as a roadmap for implementers, providing guidance and direction during the implementation of the plan.
- It ensures that all team members have access to relevant information for the implementation of planned activities.

https://uk.indeed.com/career-advice/career-development/quality-planning

Linkage among policy, strategies and plans



Quality planning cycle

Actual implementation of the planned activities

1. Situation analysis and customer needs

2. Set goal and objectives of the plan based on the situation analysis

3. Identify the activities based on each objectives

4. Set implementation schedule

5. Costing/budgeting of the activities plan

6. Set standards and indicators to measure the achievement

7. Get endorsement of the plan from HMT

Tools and Techniques for Quality Planning

- **Situation analysis stage**
  - Quality standards/checklist that can measure the level of implementation
- **Goal, Objective setting stage**
  - Problem analysis to identify the overriding problem and establishing the causes and effects related to that problem
  - SWOT analysis to identify strengths, weakness, opportunity and threats
  - Brainstorming to gather information where multiple ideas and inputs are captured for later analysis and decision-making.
- **Activity setting stage**
  - Flowchart to check the bottlenecks of work/process frow
  - Root Cause Analysis to identify the underlying causes of a problem or issue

Quality Planning format

- The quality planning format can be designed differently for each institution. However, the following information must be included in the plan:
- Current situation of quality management activities at the health facility
- Goals and objectives of the plan
- Quality improvement activities with details based on the 5W1H (What, Why, Where, When, Who, and How)
- Estimated costs for implementing the planned activities
- Timeline for implementation of the planned activities
- Means of verification and verifiable indicators to measure the achievement of the planned activities

Meetings on QM

QIT-HMT meeting

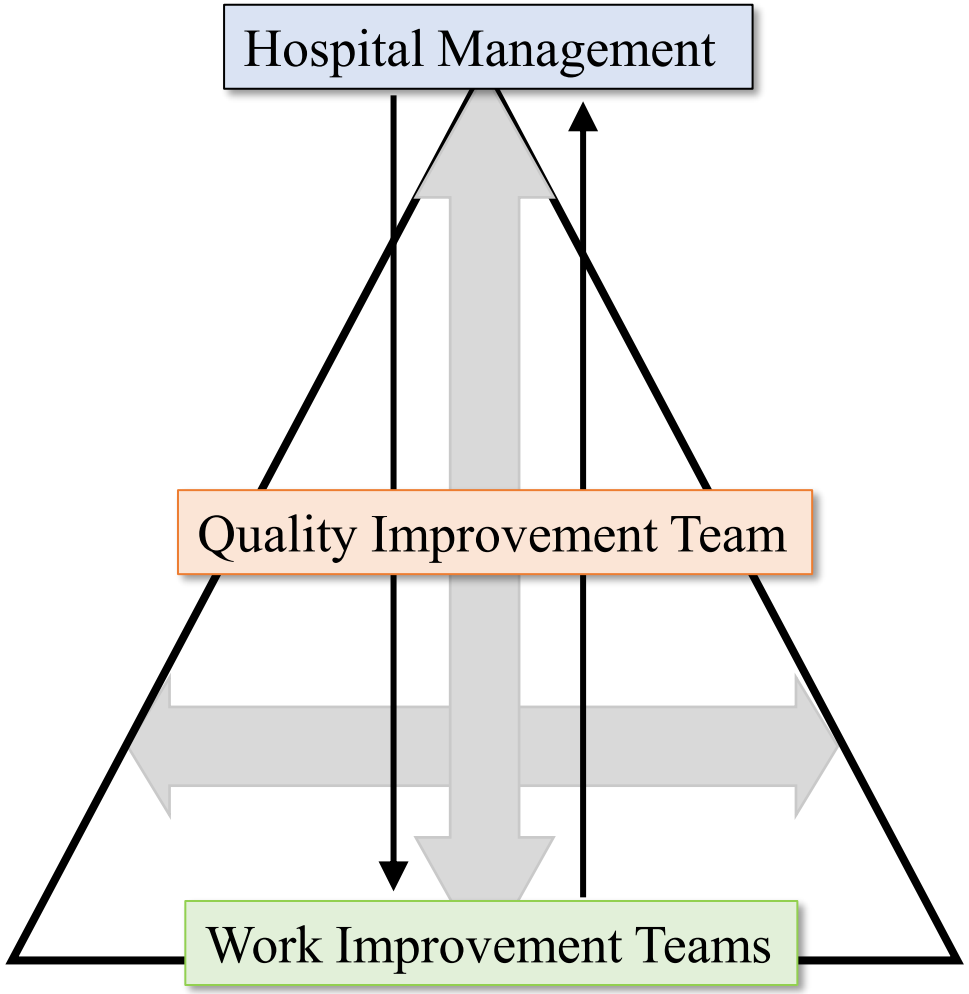
- Hospital management and the QIT need to hold periodic meetings to discuss the progress of planned activities, health resource management, and other issues that require decision-making.

QIT meeting

- The QIT needs to hold regular team meetings to discuss the progress and achievements of planned activities, training, internal monitoring, supervision, and other related matters.

QIT-WIT meeting

- WIT and QIT need to hold periodic meetings to discuss the progress of planned activities, technical challenges, resource allocation, and other related issues.



Meetings on QM

Hospital Management

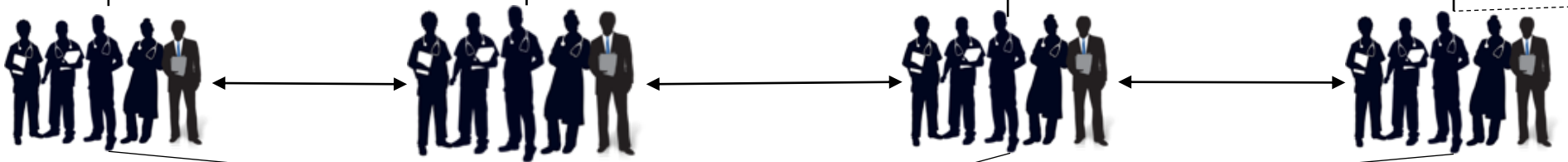
HMT internal meeting

QIT-HMT meeting

Quality Improvement Team (QIT)

QIT internal meeting

QIT-WIT meeting



WIT internal meeting

Inter-departmental information sharing

Work Improvement Teams (WITs)

Technical supports to WITs

- One of the important tasks of the QIT is to provide technical support to WITs to enable them to carry out their daily quality management (QM) activities.
- Technical support for WITs can be provided through regular supportive supervision, continuous professional education, on-demand on-the-job training (OJT), and other relevant means.
- The necessary support should be considered according to the specific needs and vulnerabilities of each WIT.

Trainings of staff on QM

- In-house training on Quality Management (QM) and the 5S-KAIZEN-TQM approach is very important for sustaining QM activities.
- Training topics need to be carefully selected based on the situation of WITs and other health workers.
- When conducting in-house training, it is recommended to prepare a training implementation report. The report should include information such as the training program, participant details, pre- and post-test results, and an evaluation of the training course.

Record keeping

The following documents need to be recorded at **QIT level**;

- Roles and responsibilities of QIT
- QM annual planning (Action plan)
- Minutes of meetings (QIT-QIT, QIT-HMT, QIT-WIT)
- Training records (type of training, participants, where trained personnel is working in the hospital or resigned
- KAIZEN cases from different WIT
- 5S-KAIZEN implementation status (progress) in the health facility
- Internal monitoring results

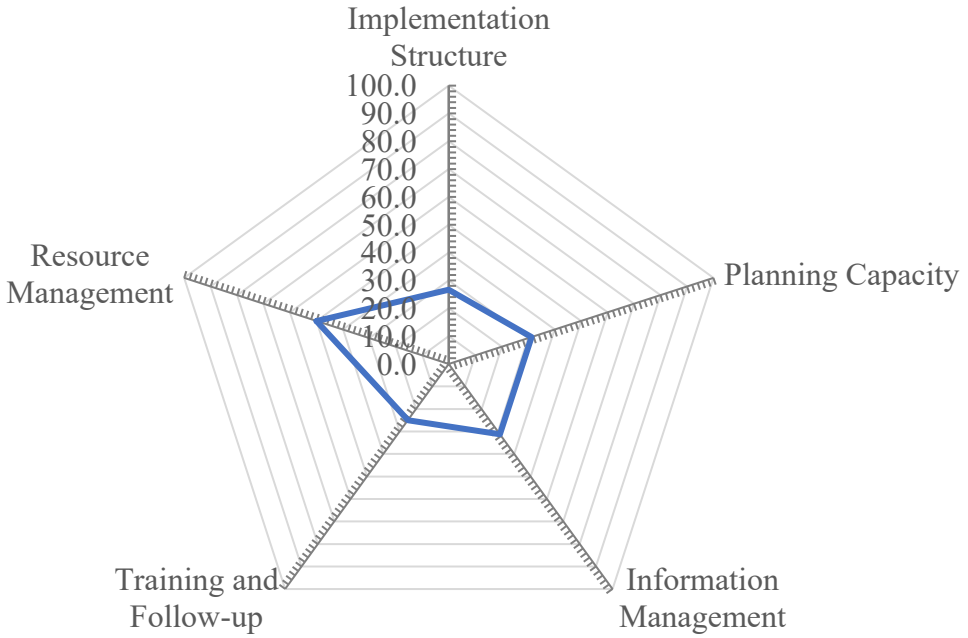
The following documents need to be recorded at **WIT level**;

- Roles and responsibilities of WIT
- Minutes of WIT meeting
- Departmental action plan
- Daily 5S checklist
- Daily cleaning schedule
- KAIZEN cases (QC story records)
- Medical equipment function check sheet
- Commodities, medicines, Consumables inventory

Monitoring of QIT functions

- Monitoring of QIT functions is conducted quarterly, biannually, or annually depending on the stage of implementation.
- QIT functions are monitored based on five categories:
  - Implementation Structure (IS)
  - Planning and Reporting (PL)
  - Information Management (IM)
  - Training and Follow-up (TF)
  - Resource Management (RM)
- When the QIT/WIT Function Check Sheet is used for monitoring, evidence needs to be verified.
- Strengths and weaknesses should be identified during the monitoring process.

Example:
XXXXXXX Hospital: QIT/WIT function check



Implementation Structure	Planning Capacity	Information Management	Training and Follow-up	Resource Management
26.7	31.3	31.3	25.0	50.0

Strength

- Basic QM implementation structure is established
- Basic 5S (S1~S3) is implemented in some areas

Weaknesses

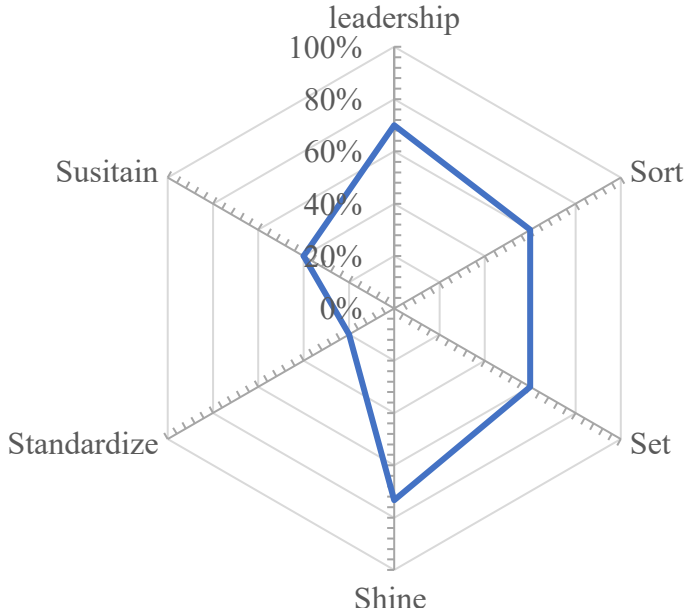
- Weak Rerecord keeping of QIT/WIT activities was observed
- Insufficient knowledge and skills on 5S among staff were observed
- It seems technical support from QIT to WITs is insufficient

Visited on 29/10/2024

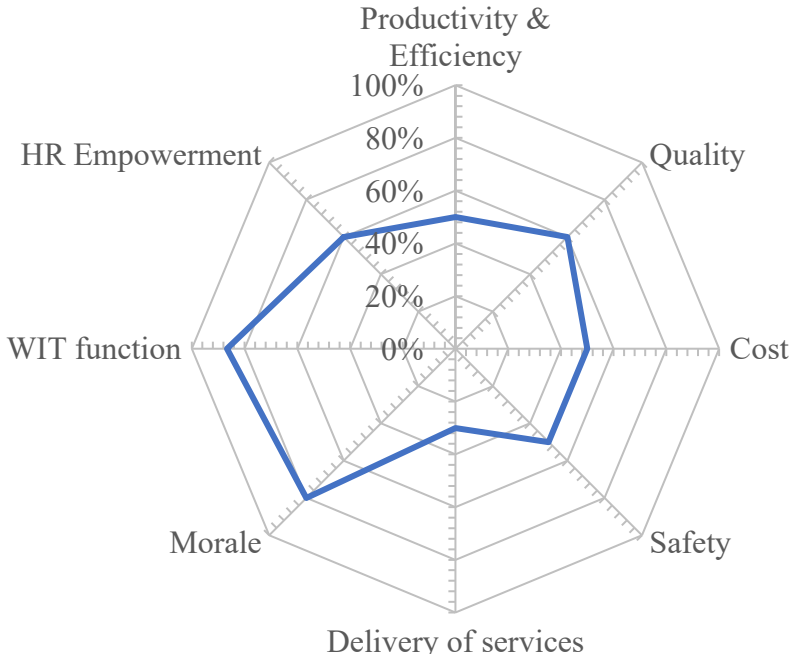
Internal monitoring of 5S-KAIZEN-TQM activities

- Internal monitoring of 5S-KAIZEN-TQM activities is extremely important to ensure the sustainability of these activities within healthcare organizations.
- It is recommended to conduct in-house monitoring quarterly to assess the progress of activities, the status of implementation structures, and any technical issues.
- The results of in-house monitoring should be appropriately analyzed, and feedback should be provided to each department and section.

Example: XXXX Policlinic: 5S-KAIZEN M&E sheet results



% of	
Leadership	70%
Sort	60%
Set	60%
Shine	73%
Standardize	20%
Sustain	40%
Sub total	52%



% of	
Productivity & Efficiency	50%
Quality	60%
Cost	50%
Safety	50%
Delivery of services	30%
Morale	80%
WIT function	87%
HR Empowerment	60%
Sub total	58%

Reporting

- At the end of each fiscal year, the QIT must assess the implementation rate and goal achievement of the annual activity plan for that year and reflect the analysis results in the plan for the following year. It is recommended that these results be compiled into an annual QM report. This annual reporting process also serves as an evaluation of the action plan.
- To facilitate communication and information sharing regarding quality management, WITs are encouraged to submit a brief activity report (approximately one A4 page) to the QIT every month.

Any question, comments, clarification you need?

The 5S-KAIZEN-TQM approach training materials

Problem analysis for QMS

Japan International Cooperation Agency

Fujita Planning Co., Ltd.

Objectives

At the end of the lecture, the participants will be able

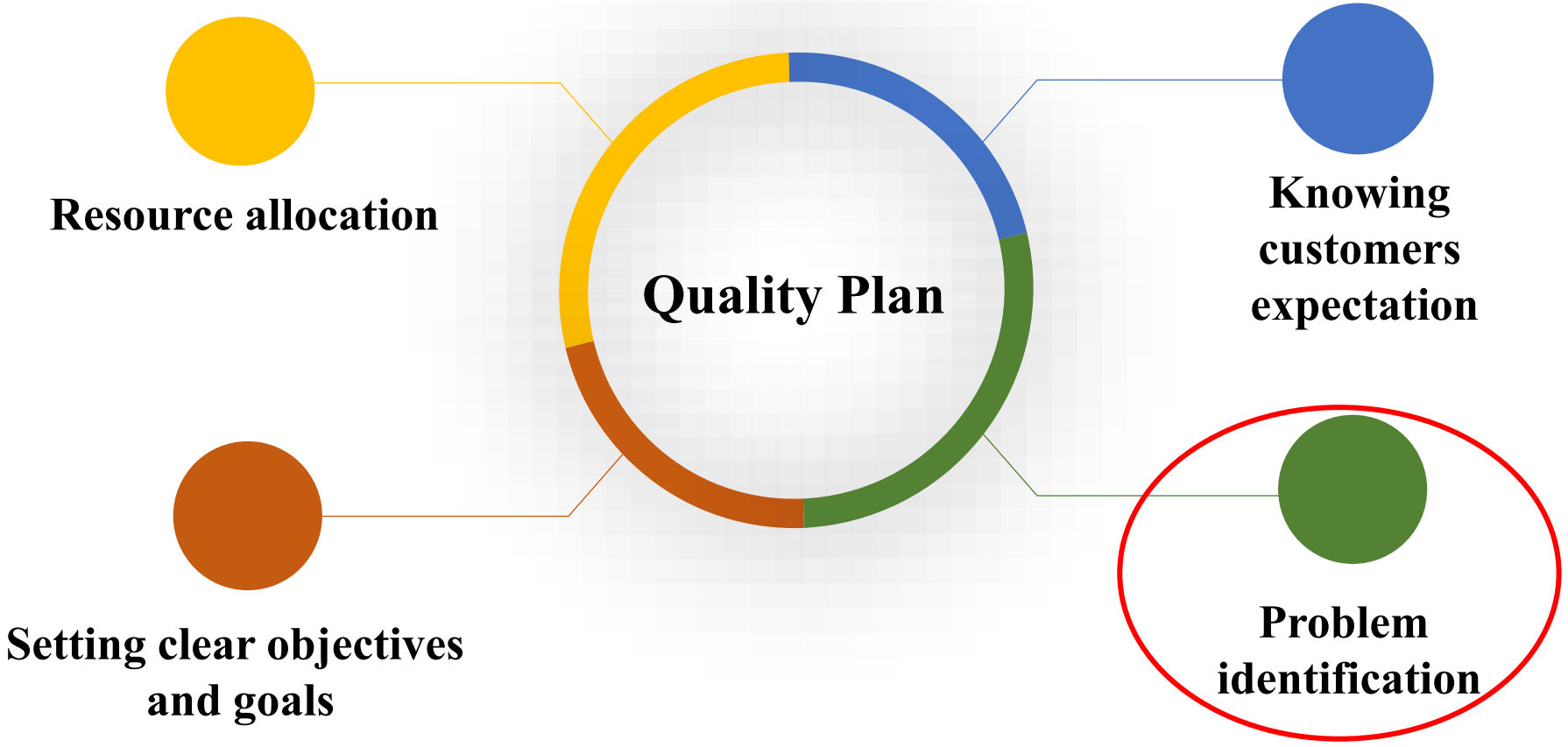
- To define “problem” in quality management
- To explain about Problem analysis
- To explain about process of Problem analysis
- To conduct Problem analysis with “Problem tree”

Background

- Quality management activities using the 5S-KAIZEN-TQM approach in target health facilities will be strengthened through this regional program.
- To promote quality management activities based on the 5S-KAIZEN-TQM approach in target health facilities, it is essential to establish a functional quality management (QM) implementation structure.
- Therefore, it is necessary to identify in advance the problems and issues that may serve as bottlenecks in establishing and operating such a structure.
  To achieve this, it is important to first conduct a thorough problem analysis to identify potential obstacles.

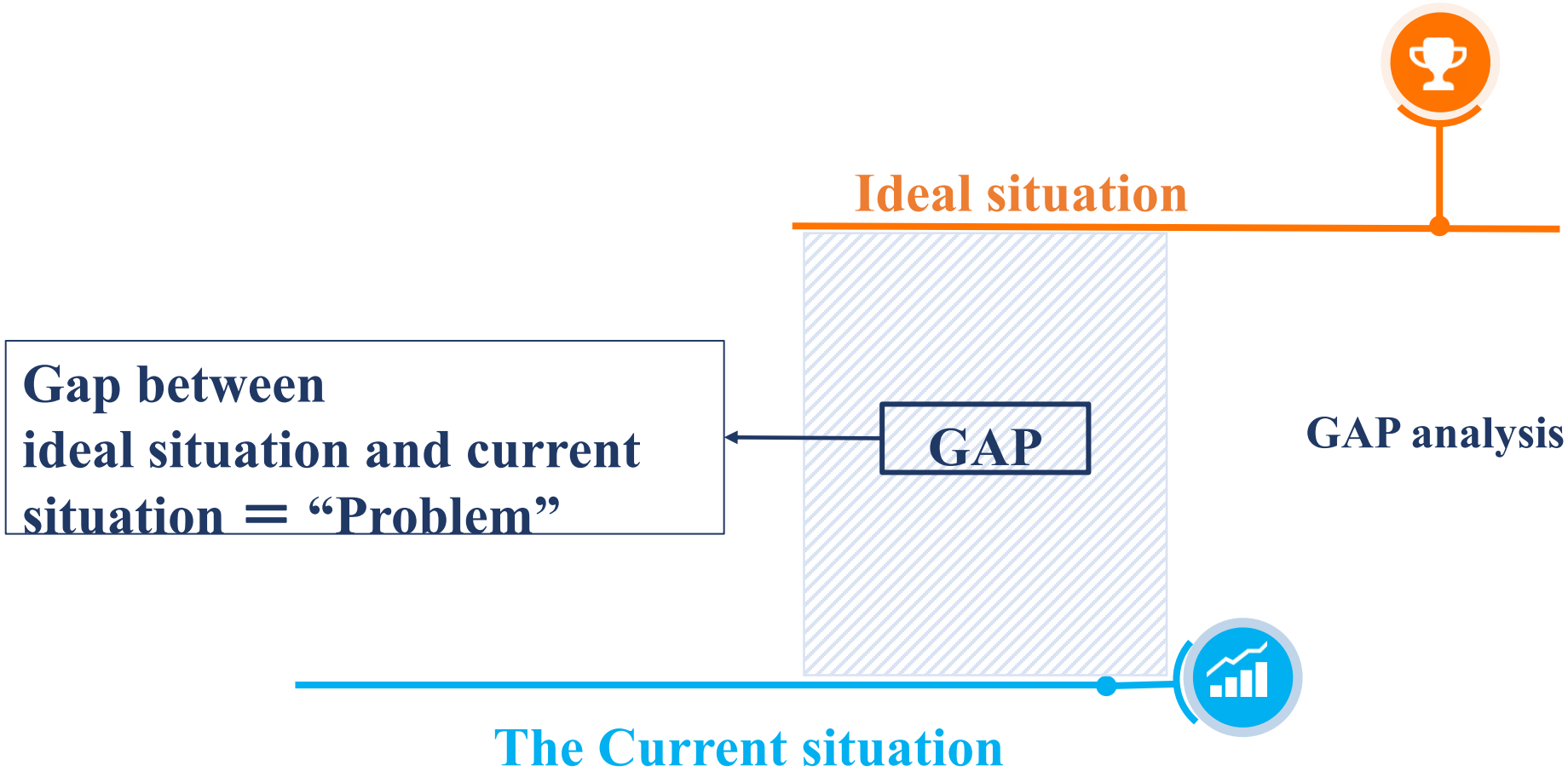
While we recognize the necessity of a quality management plan, we require clear guidance on how to develop it.

Key elements for development of Quality Plan



What's the Problem?

We need to identify problems, and solve them for improvement of quality



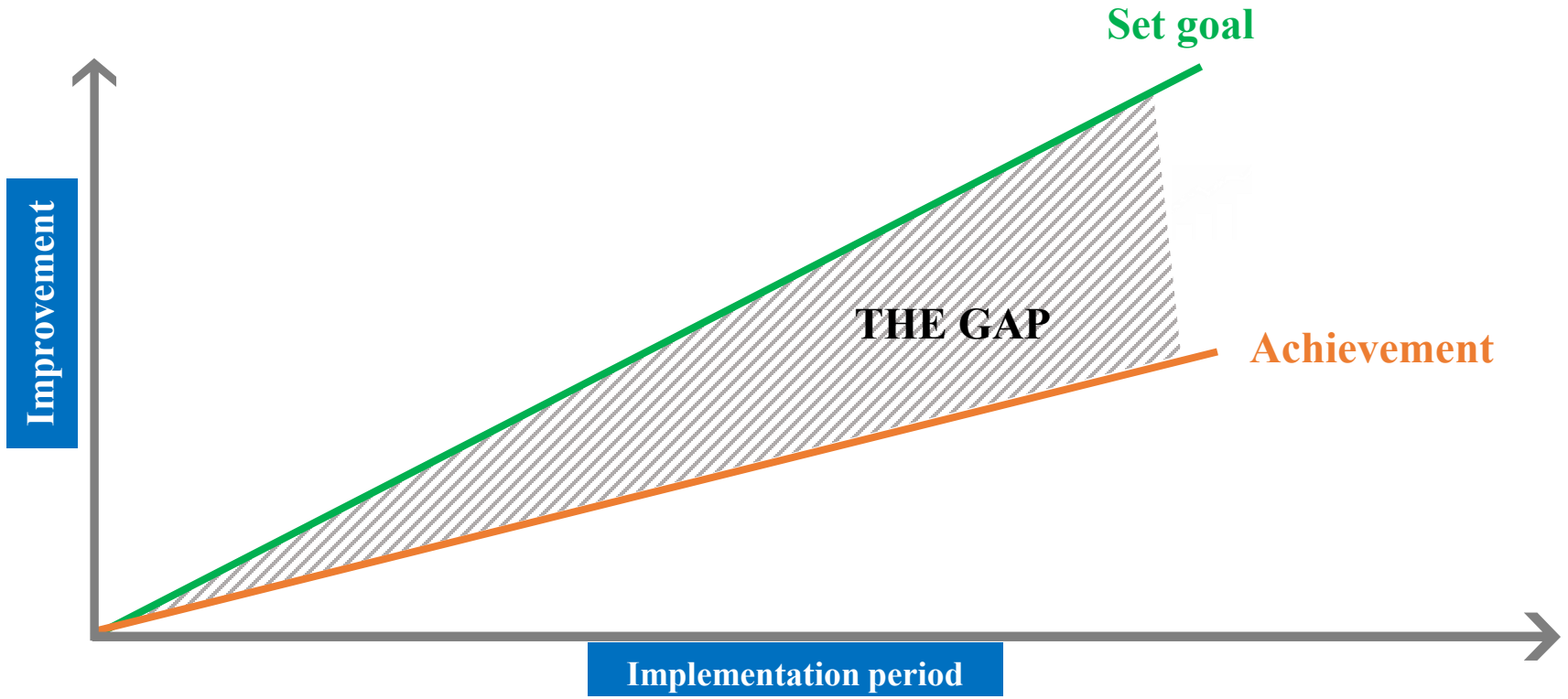
What is “Problem analysis”?

- Problem analysis is a method for understanding the context within which you intend to work.
- It helps identify the key issues and determine where best to apply your resources to achieve the greatest impact.
- Through problem analysis, you can develop a deeper understanding of the dynamics of a situation and the factors driving or sustaining it. This type of analysis can also reveal positive influences that may help improve the situation.
- By analyzing the issue, you can identify underlying assumptions that will support the development of a logical framework and facilitate project risk management.
- Problem analysis is an essential precursor to developing a theory of change and is therefore critical for effective monitoring, evaluation, and learning.

Source: https://prevention-collaborative.org/wp-content/uploads/2021/08/2017-tearfund-problem-analysis-guide-en.pdf

When to conduct Problem analysis?

It is a part of the logical foundation of any project and therefore needs to be incorporated from the beginning.

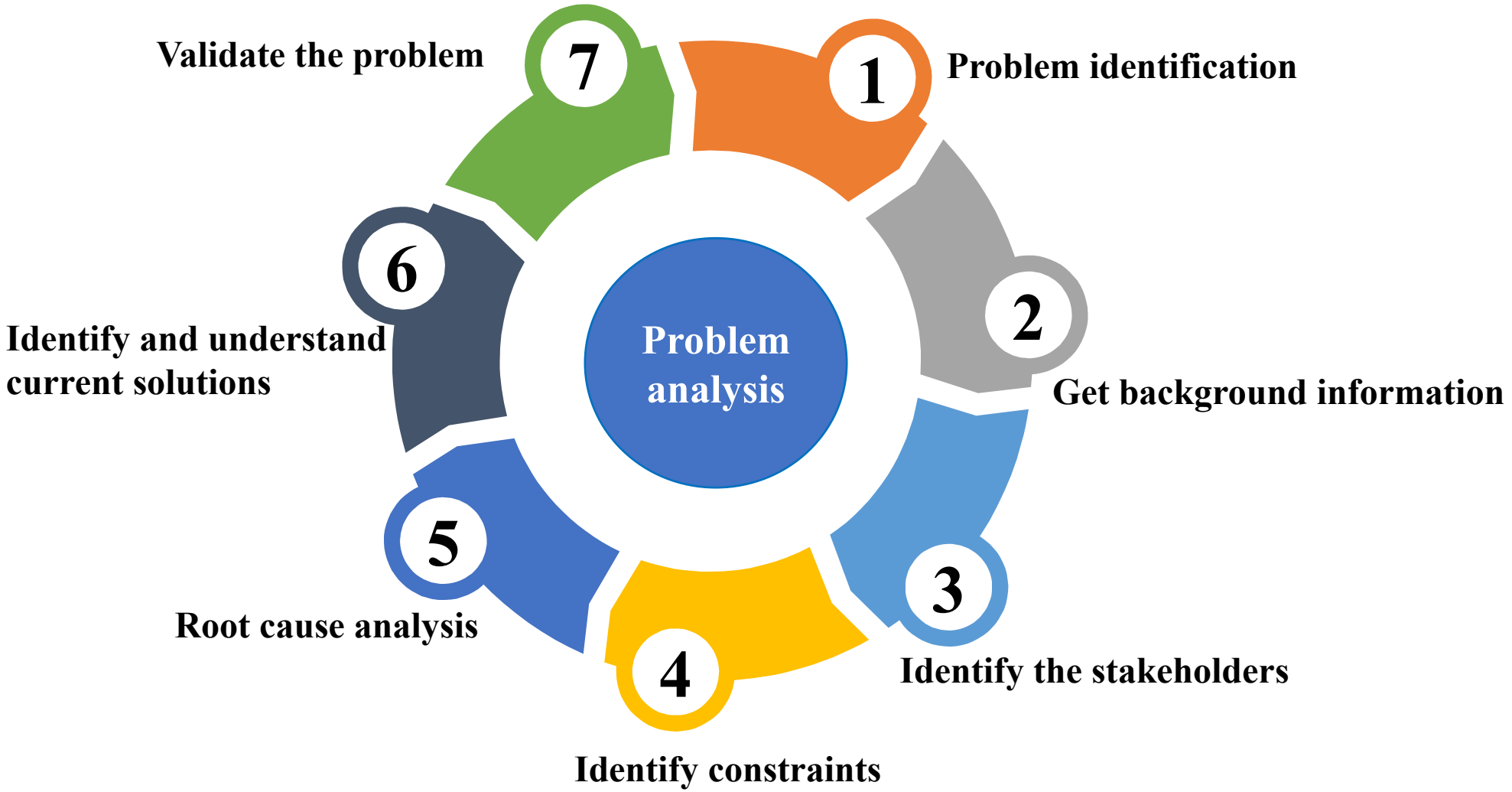


Very beginning of a project

Reviewed regularly a understanding evolves throughout the life of an intervention

It is also a part of any final evaluation so that lessons can be identified to inform future work

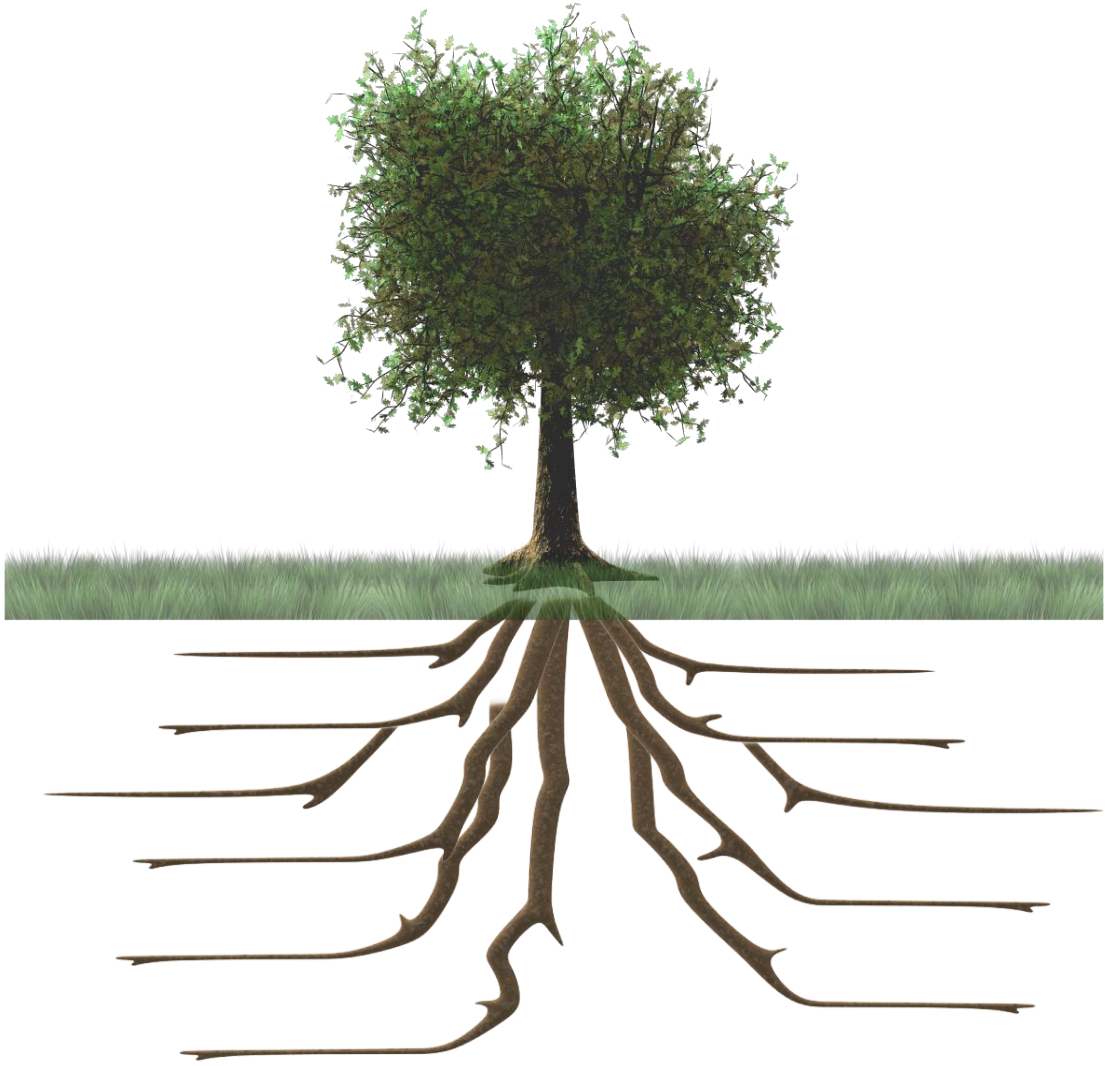
General steps for problem analysis



Conduct problem analysis with “Problem tree analysis”

Problem tree analysis

- A problem tree analysis helps identify the causes and consequences (effects) of a problematic situation that you aim to change.
- This tool reveals the complexity of the situation and highlights additional factors that may need to be addressed through complementary projects to ensure the success of your intervention.
- Problem tree analysis is most effective when conducted in a workshop setting, where a variety of stakeholders collaborate to analyze the existing situation.



Source: https://prevention-collaborative.org/wp-content/uploads/2021/08/2017-tearfund-problem-analysis-guide-en.pdf

Benefits of Problem Tree Analysis:

Benefits	Explanation
Improved Understanding	It helps to understand the problem in a more comprehensive and structured way.
Prioritization	It helps to identify the most important causes and effects, allowing for better prioritization of interventions
Solution Development	It can help to identify potential interventions and strategies by focusing on the root causes of the problem.
Shared Understanding	The process of conducting a problem tree analysis can facilitate a shared understanding of the problem among stakeholders
Clearer Problem Statements	It can help to frame problem statements in a new, better way
Better Project Planning	It is a valuable tool for project planning, helping to identify the key issues and develop effective interventions.

Step 1:Identify existing problems

- Identify existing problems within the problem area or domain of interest through brainstorming.
- Remember that a problem is not the absence of a solution, but rather an existing negative state or situation.
- Distinguish between existing, impossible, imaginary, or future problems.
- Write each problem on a post-it note and place it on the table so that all participants have the opportunity to express the problems they experience.
- Categorize the identified problems into groups, such as:
  - Problems related to management
  - Problems related to training, knowledge, and staff skills

Step 2:Define the core problem

- Discuss among the participants and define the core problem (also referred to as the focal problem or the central point of the overall problem) from the identified existing problems.
- After discussion and clarification by the participants, all problems raised during the session should be addressed appropriately.

Facilitator's Note:

In this session, we would like you to analyze issues related to the Quality Management System in your facility

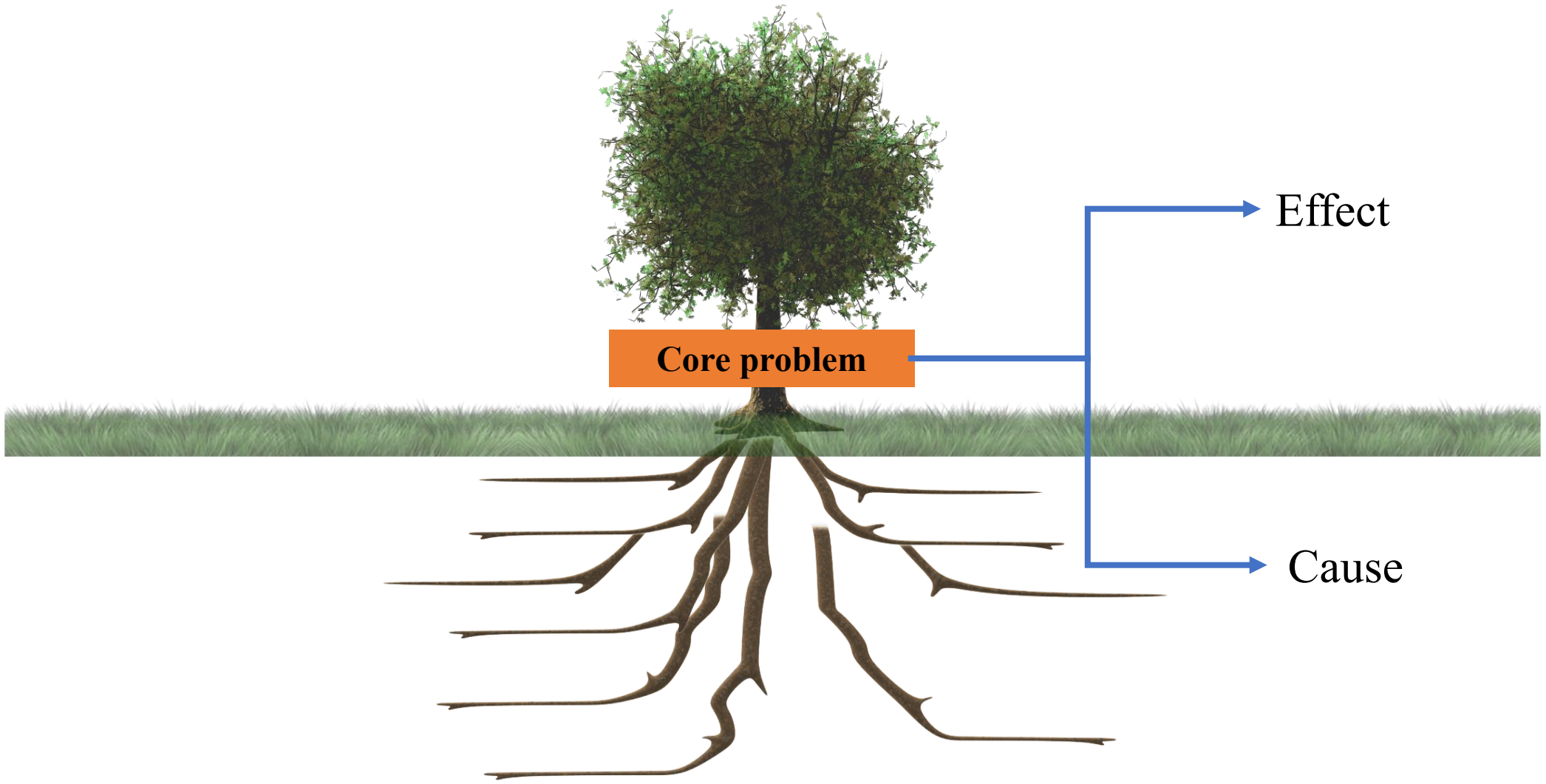
Step 1 and 2 procedures

Brain storm about problems on selected theme

Discuss about problems mentioned by the members and categorize the problems

- Issues related with management
- Issues related with Health resources
- Issues related with Knowledge and skills of Health workers related
- Cross cutting issues
- Other issues

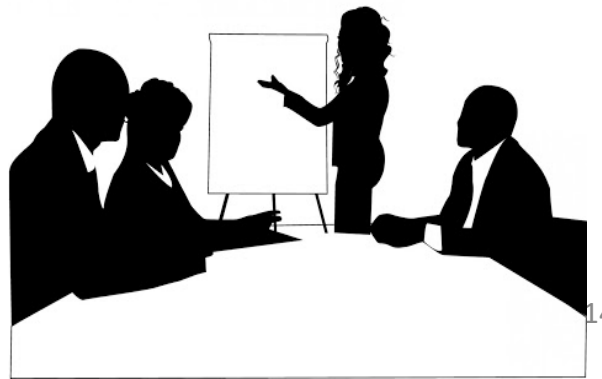
Discuss and prioritize the problems and select ”Core problem”

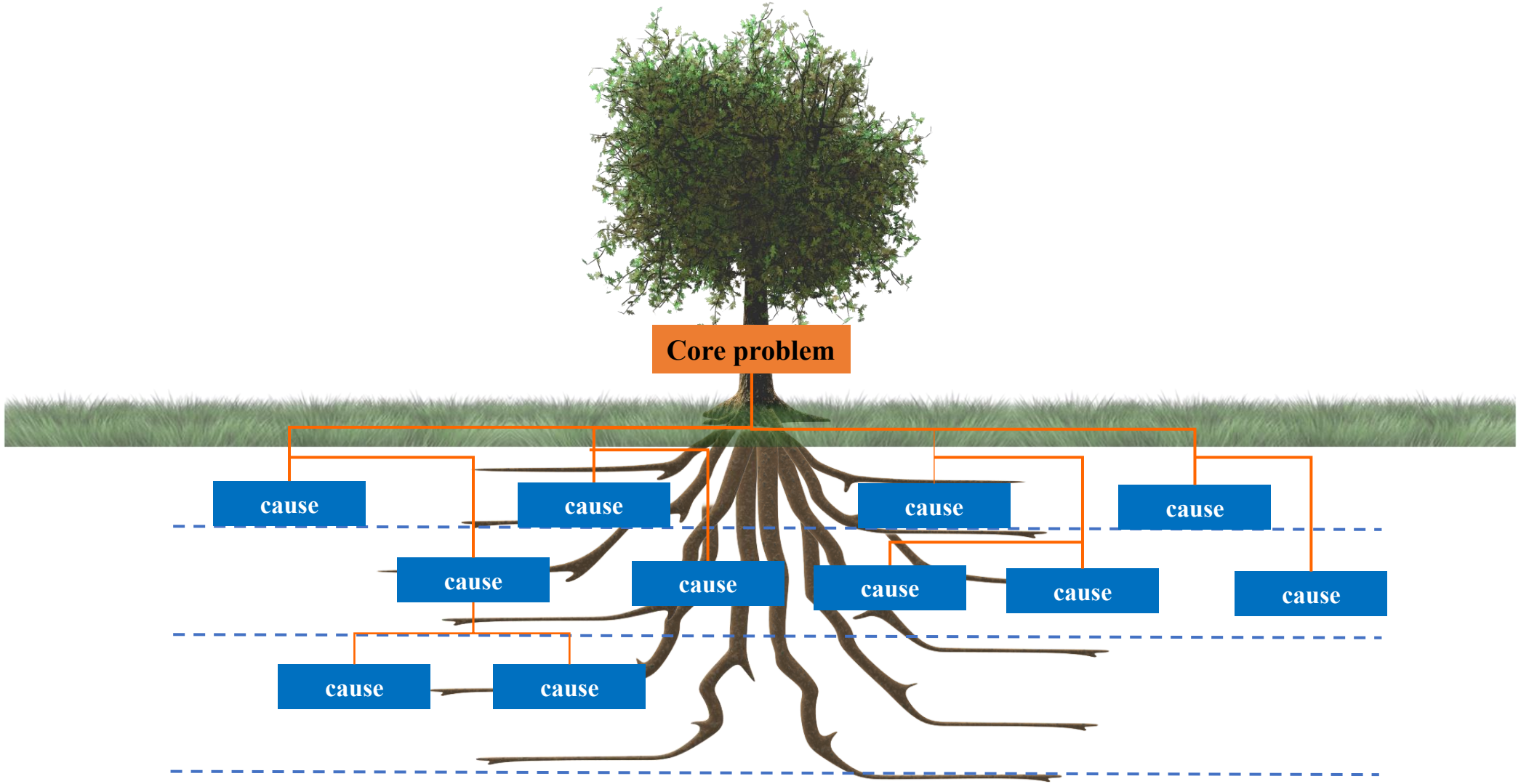

Effect
Core problem
Cause

Step 3: Formulate the causes

Formulate the causes of the core problem.

- Brainstorm and list the causes of the main problem, placing them as the “roots” of the tree.
- Keep in mind that the problems identified in Step 1 may also be causes of the core problem.
- It is recommended to carry out this step as a team, aiming to reach a common consensus.

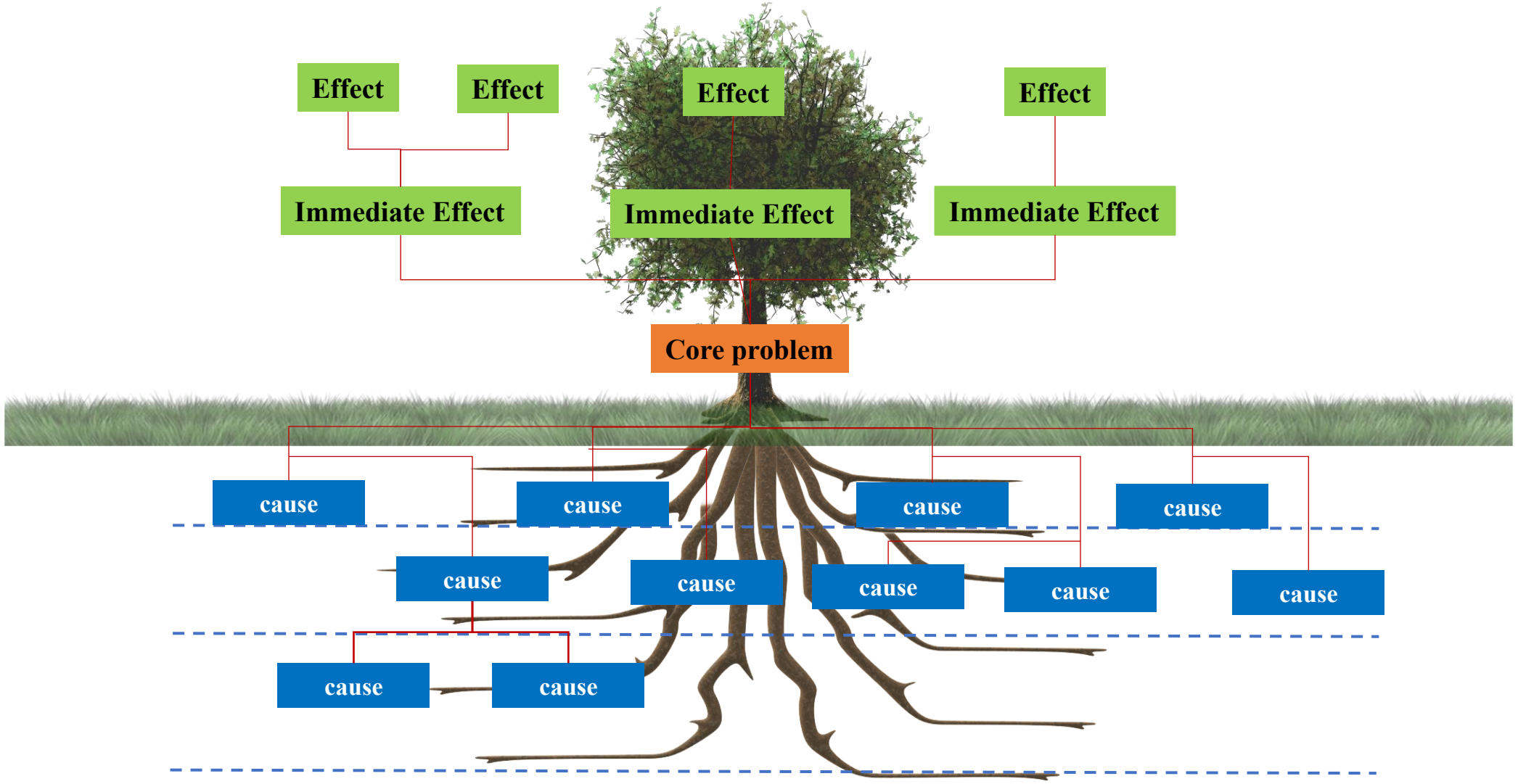



Core problem
cause
cause
cause
cause
cause
cause
cause
cause
cause
cause
cause

Step 4: Formulate the effects

Formulate the effects (consequences) of the core problem.

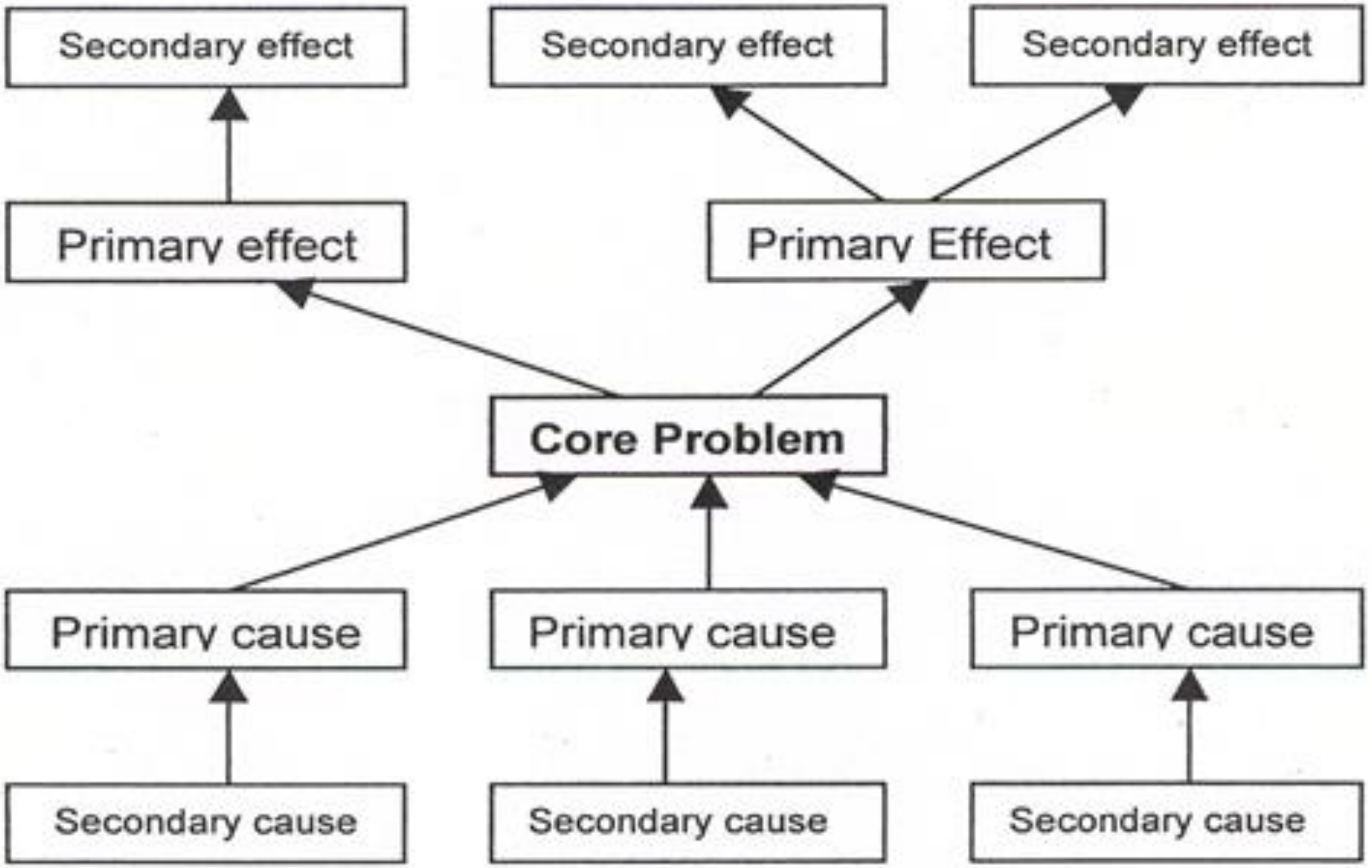
- Brainstorm and list the effects or consequences of the main problem, placing them as the “branches” of the tree.
- Keep in mind that the problems identified in Step 1 may also be effects of the core problem.
- It is recommended to conduct this step as a team, aiming to reach a common consensus.


Effect
Effect
Effect
Effect
Immediate Effect
Immediate Effect
Immediate Effect
Core problem
cause
cause
cause
cause
cause
cause
cause
cause
cause
cause
cause

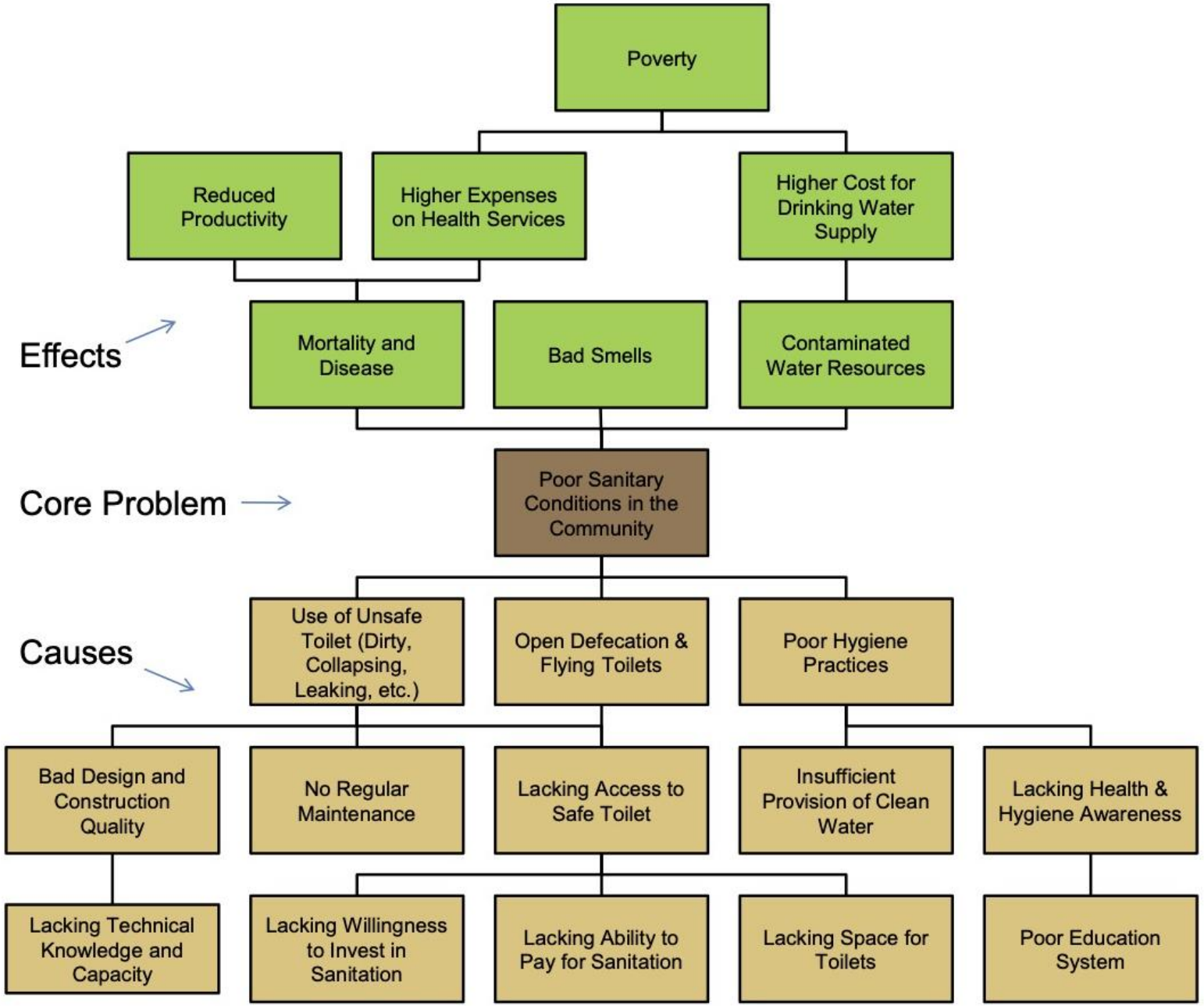
Step 5: Draw a tree diagram

Draw a diagram (problem tree) that represents the cause–effect relationships (problem hierarchy).

- Place the focal problem in the center of the diagram, forming the trunk of the tree.
- Position the causes below and the effects above, subdividing them into roots and branches (similar to a mind map).
- Explore the causes and effects in greater depth.
- If possible, ensure that all causes and effects are placed on the same horizontal level.



https://uxdesign.cc/the-best-design-tools-arent-apps-bf5f185fc261


Poverty
Reduced Productivity
Higher Expenses on Health Services
Higher Cost for Drinking Water Supply
Effects
Mortality and Disease
Bad Smells
Contaminated Water Resources
Core Problem
Poor Sanitary Conditions in the Community
Causes
Use of Unsafe Toilet (Dirty, Collapsing, Leaking, etc.)
Open Defecation & Flying Toilets
Poor Hygiene Practices
Bad Design and Construction Quality
No Regular Maintenance
Lacking Access to Safe Toilet
Insufficient Provision of Clean Water
Lacking Health & Hygiene Awareness
Lacking Technical Knowledge and Capacity
Lacking Willingness to Invest in Sanitation
Lacking Ability to Pay for Sanitation
Lacking Space for Toilets
Poor Education System

Step 6:
Review the logic and verify the diagram

- Analyze the relationships between the causes and effects to gain a deeper understanding of the problem.
- Review the logic and verify the overall diagram for validity and completeness. Make adjustments if necessary
  - Question to ask for each problem: are these causes sufficient to explain why this occurs?
  - Consider the actions that can eliminate causes

Now that you know how to conduct a problem analysis, let's start by analyzing the problems in the quality management system at your workplace.

Any question, comments, clarification you need?