PROJECT IMPROVEMENT AND AUDIT AND CLOSURE

Module 12

Process Improvement , Managing an Outsourced Project, Software Process Improvement, contemporary Frameworks and Methodologies (Kaizen, CMM, ISO 9000 and Six Sigma, Rational Unified Process and Extreme Programming., etc), audit and closure of projects

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

Mongolian National University

PROCESS IMPROVEMENT WITH LEADERSHIP AND TECHNOLOGY

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

Anantatmula, V. S. (2006). Improving project performance through leadership and technology. Paper presented at PMI® Research Conference: New Directions in Project Management, Montréal, Québec, Canada. Newtown Square, PA: Project Management Institute.

PROCESS IMPROVEMENT FRAMEWORKS, METHODOLOGIES

The popular process improvement frameworks, methodologies:

- Kaizen
- 5S
- PDCA Cycle
- Six Sigma
- ISO 9000 *(framework)*
- CMM *(framework)*
- Six Sigma *(framework)*
- Total Quality Management (TQM)
- DfSS
- Deming 14 points
- Juran Trilogy
- Crossby's Zero Defects program
- Poka Yoke (Mistake proofing)
- Quality management system
- Rational Unified Process *(methodologies in IT)*
- Extreme Programming *(methodologies in IT)*

and more

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

Rever, H. (2008). Five key elements to process improvement project success. Paper presented at PMI® Global Congress 2008—North America, Denver, CO. Newtown Square, PA: Project Management Institute.

KAIZEN

Kaizen is a Japanese term.

"change for the better" or "continuous improvement"

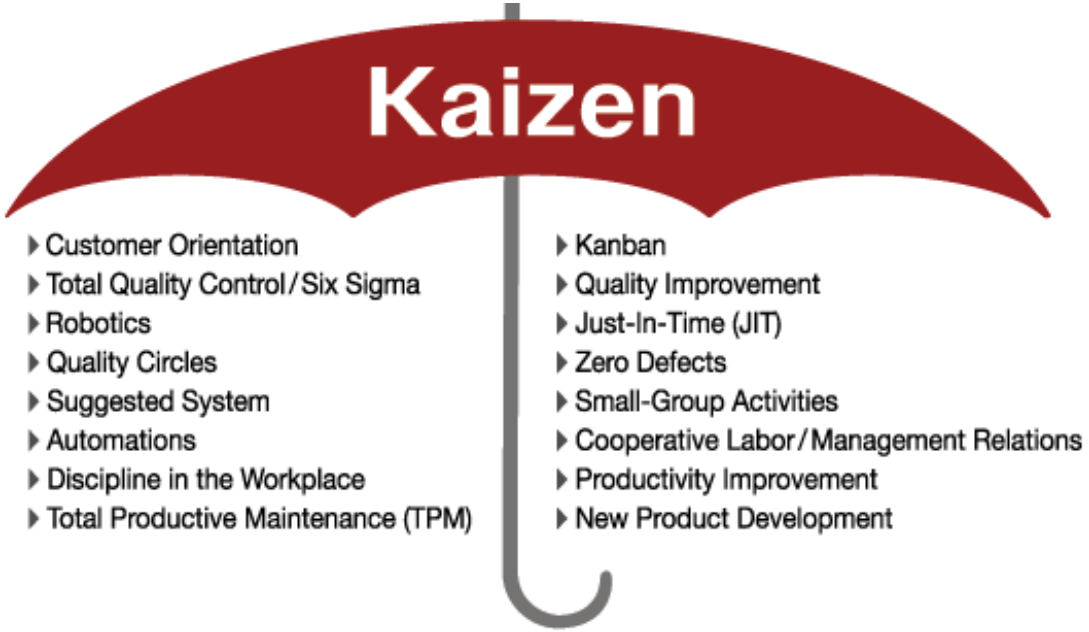
The concept of kaizen involves

- making the environment more effective by creating a team atmosphere
- Improving everyday procedures,
- Ensuring employee engagement
- Making a project/job more fulfilling, less tiring, and safer.

To eliminate waste (Muda) in the workplace (Gemba).

改善

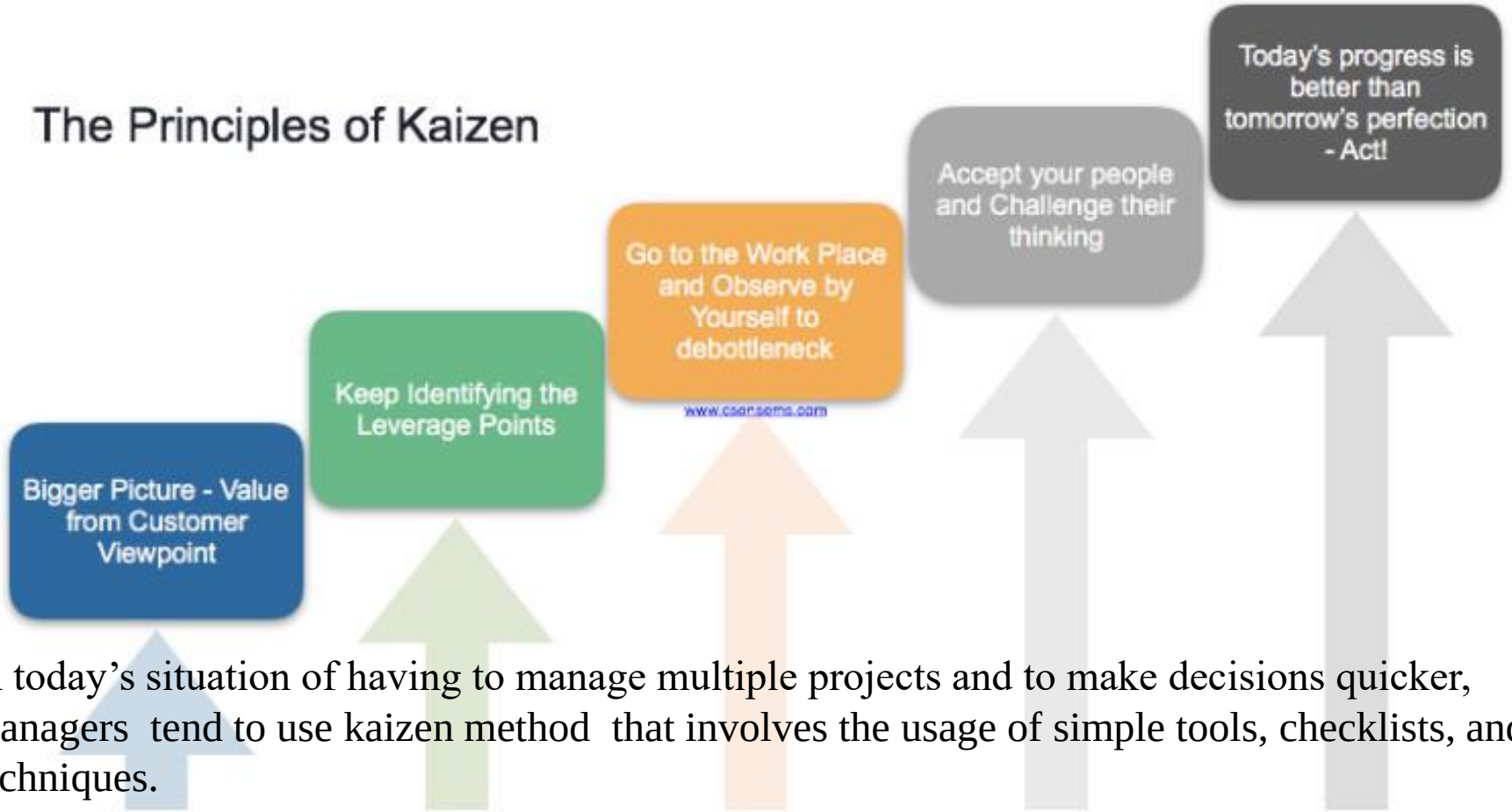
Kai = Change Zen = Good



Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://www.kanbanchi.com/what-is-kaizen

KAIZEN



In today's situation of having to manage multiple projects and to make decisions quicker, managers tend to use kaizen method that involves the usage of simple tools, checklists, and techniques.

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://www.linkedin.com/pulse/principles-kaizen-kannan-ls/

KAIZEN

Kaizen's ten specific principles:

- Improve everything continuously.
- Abolish old, traditional concepts.
- Accept no excuses and make things happen.
- Say no to the status quo of implementing new methods and assuming how they will work.
- If something is wrong, correct it.
- Empower everyone to take part in problem-solving.
- Get information and opinions from multiple people.
- Before making decisions, ask "why"-questions five times to get to the root cause. (5 Why Method)
- Be economical. Save money through small improvements to spend the saved money on further improvements.
- Remember that improvement has no limits. Never stop trying to improve.

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

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5 WHY METHOD OF KAIZEN

(5 Why Method)

Before making decisions, ask “why”-questions five times to get to the root cause.

The 5 W and 1 H of Kaizen

Who?	What?	Where?
1. Who does it? 2. Who is doing it? 3. Who should be doing it? 4. Who else can do it? 5. Who else should do it? 6. Who is doing 3-Mus?	1. What to do? 2. What is being done? 3. What should be done? 4. What else can be done? 5. What else should be done? 6. What 3-Mus are being done?	1. Where to do it? 2. Where is it done? 3. Where should it be done? 4. Where else can it be done? 5. Where else should it be done? 6. Where are 3-Mus being done?
When?	**Why?**	**How?**
1. When to do it? 2. When is it done? 3. When should it be done? 4. What other time can it be done? 5. What other time should it be done? 6. Are there any time 3-Mus?	1. Why does he do it? 2. Why do it? 3. Why do it there? 4. Why do it then? 5. Why do it that way? 6. Are there 3-Mus in the way of thinking?	1. How to do it? 2. How is it done? 3. How should it be done? 4. Can this method be used in other areas? 5. Is there any other way to do it? 6. Are there any 3-Mus in the method?

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://www.kanbanchi.com/what-is-kaizen

THE SEVEN WASTES (MUDA) OF KAIZEN

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://leanmanufacturingtools.org/77/the-seven-wastes-7-mudas/

https://www.kanbanchi.com/what-is-kaizen

KAIZEN 5-GEMBA PRINCIPLES IN LEAN MANAGEMENT

GEMBA

- **G**enchi Genbutsu- Go and See
- **E**ngage- Understand and ask about issues use the 5 why's
- **M**uda, Mura, Muri- Discover forms of Waste
- **B**e Respectful- Always be respectful
- **A**nalyze and assess the data you gathered include the people their.

Lean management (continuous management) is a systematic method for the elimination of wastes within a project whole process.

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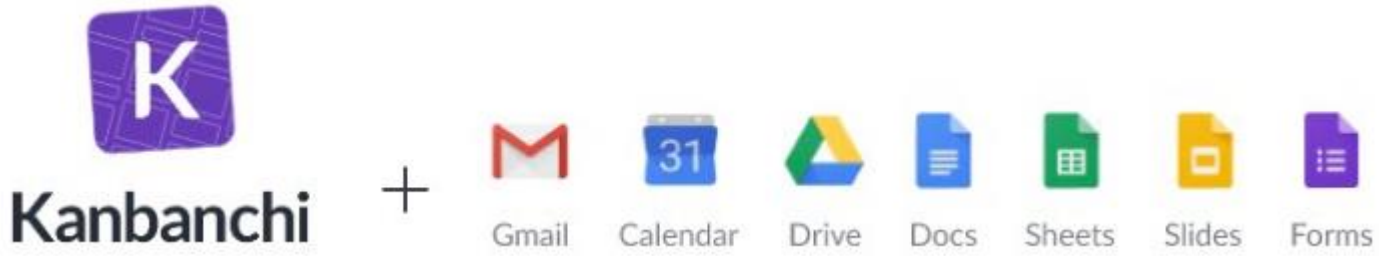
KANBANCHI TOOL FOR KAIZEN MANAGEMENT



Kanbanchi is built specifically for G Suite. You sign up with a Google account, manipulate your project boards as files in Google Drive, give flexible access permissions, create events in your Google Calendar, attach Google docs, sheets, and forms to your boards, and more.

Kanban board *(in Module 7)* is a powerful tool that is widely used for project management.

All Kanban boards in Kanbanchi may be converted to a Gantt chart *(in Module 7)* in one click.

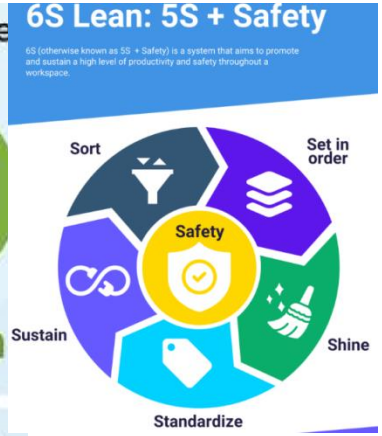
Kanbanchi has a collection of built-in reports that may be created based on your boar data.

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

"Project Management Techniques". http://www.tifb.state.tx.us/Handbooks/Project_Management.htm. Last update time unknown. Accessed Nov. 4, 2002.

http://www.umsl.edu/~sauterv/analysis/488_f02_papers/ProjMgmt.html

KAIZEN 5S AND LEAN 6S



5S : Kaizen Reduces Waste in areas such as inventory, waiting times, transportation, worker motion, employee skills, over production, excess quality and in processes of a project/organization.

6S for Safety: create a positive impact on project productivity and quality; encourage a stress-free and healthy atmosphere where project team can feel safe and secure; and
make it easy to recognize potential hazards and install safety controls.

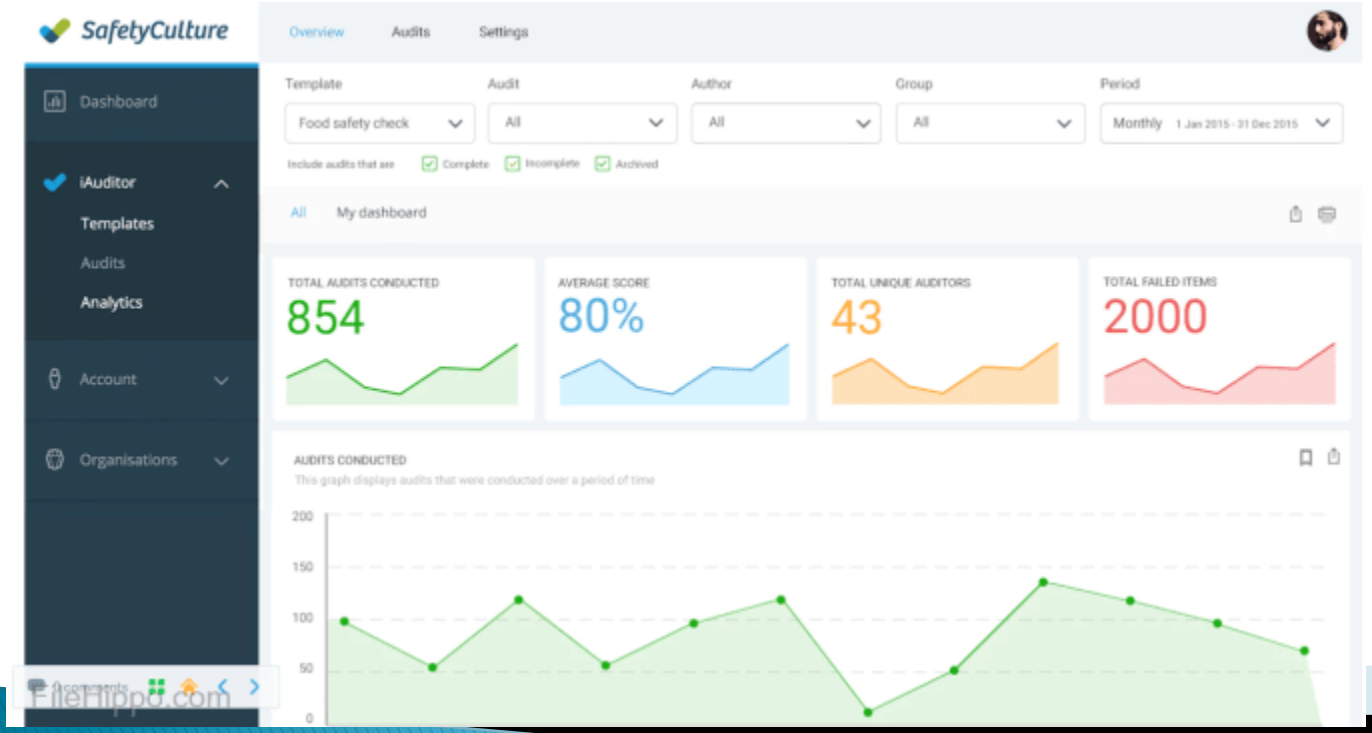
Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://safetyculture.com/topics/6s-lean/

http://cqcert.co.uk/5s-kaizen-training/

IMPLEMENT AND AUDIT 6S IN YOUR WORKPLACE USING IAUDITOR

Using 6s lean software such as iAuditor by SafetyCulture fom https://app.safetyculture.io/



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https://safetyculture.com/topics/6s-lean/

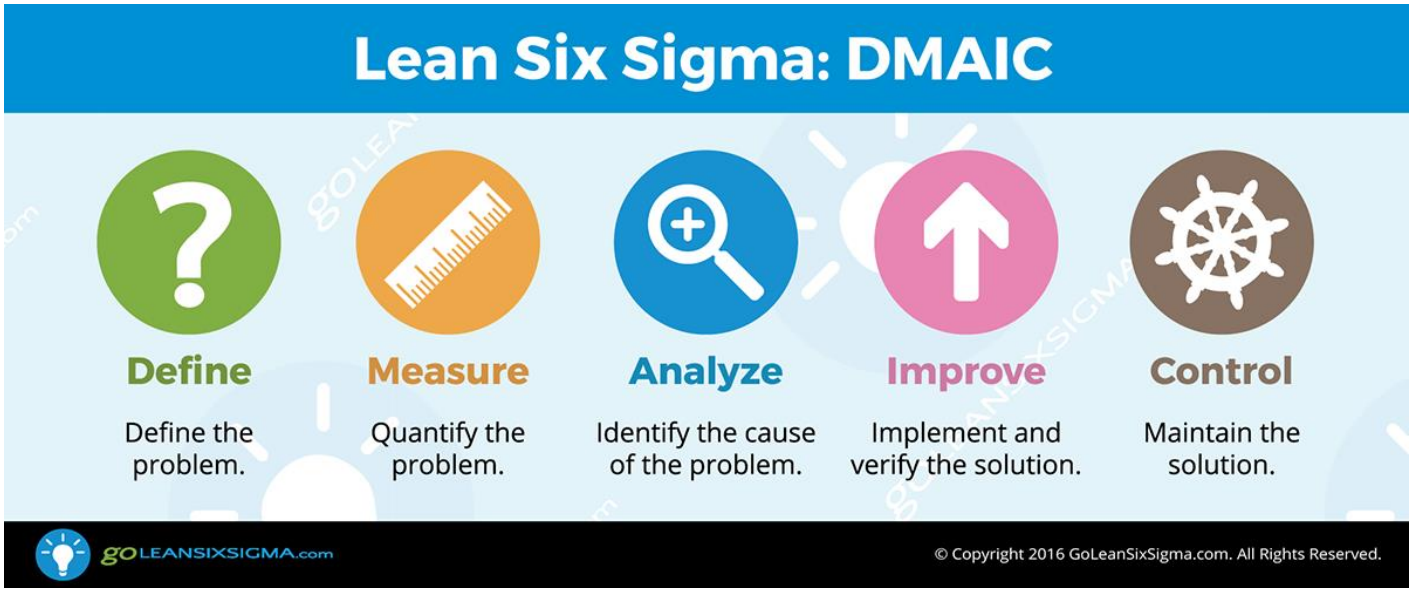
LEAN MANAGEMENT TOOLS

- **5S**
- **Kaizen**
- VSM
- PDCA (Plan-Do-Check-Act)
- TPM(Total Productive Maintenance)
- Standardized Work
- Heijunka (Leveling Production)
- JIT(Just In Time)
- Jidoka(Autonomation)
- Poka-Yoke(Error Proofing)
- Kanban
- Takt Time
- Continuous Flow
- Cellular Manufacturing
- SMED(Single Minute Exchange of Dies)
- OEE
- Six Big Losses
- Andon
- Hoshin Kanri (Policy Deployment)
- Why-Why Analysis (5 Why Analysis)
- Gemba
- **3M Waste(Muda, Mura, Muri)**
- SMART Goals
- KPIs (Key Performance Indicators)
- Visual Management

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://techqualitypedia.com/lean-tools/

SIX SIGMA METHODOLOGY



Benefits:
Increase profit
Reduce costs
Improve efficiency and effectiveness
Help team to develop

Six Sigma is an approach to improve quality in manufacturing and business projects/processes. The Greek letter sigma refers to standard deviation—Six Sigma means "six standard deviations from the mean."

DMAIC (Define opportunities, Measure performance, Analyze opportunity, Improve performance, Control performance) is a five-phase approach to Six Sigma improvement

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://thinkthyme.com/project-management/six-sigma

SIX SIGMA VS KAIZEN METHODOLOGIES

Like Kaizen, Six Sigma is focused on making and bringing continuous improvements into various processes.

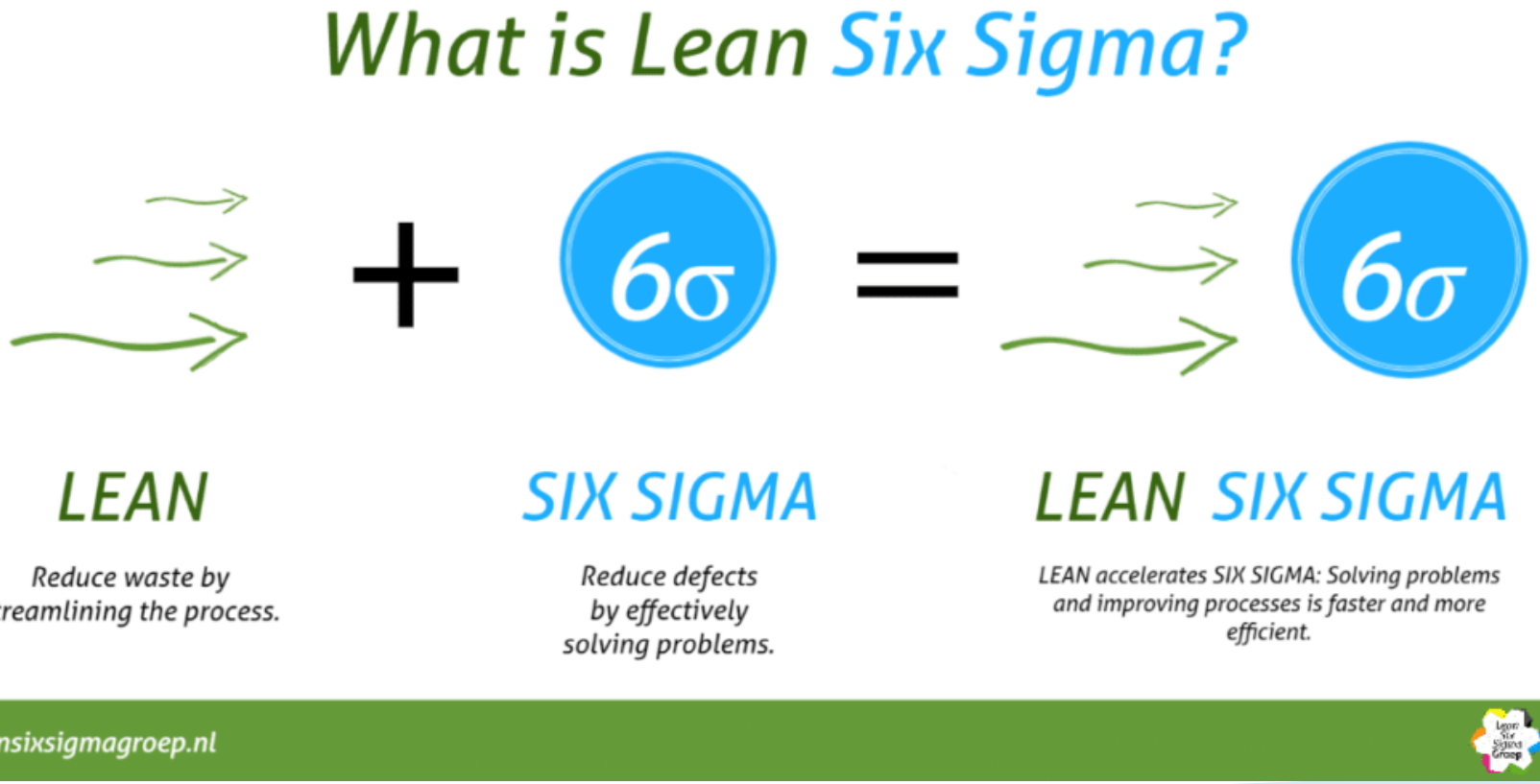
Unlike Kaizen, which primary goal is increasing the efficiency of all aspects of processes, Six Sigma focuses on improving the quality of the final product by finding and eliminating causes of defects. Six Sigma uses statistical analyses and aims to reduce defects to zero.

At the end of the 1990s, over 60% of companies with a Fortune 500 status started to apply Six Sigma. Thus, Motorola has declared about $17 billion in savings since 2006 as a direct result of implementing Six Sigma.

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://www.kanbanchi.com/lean-management

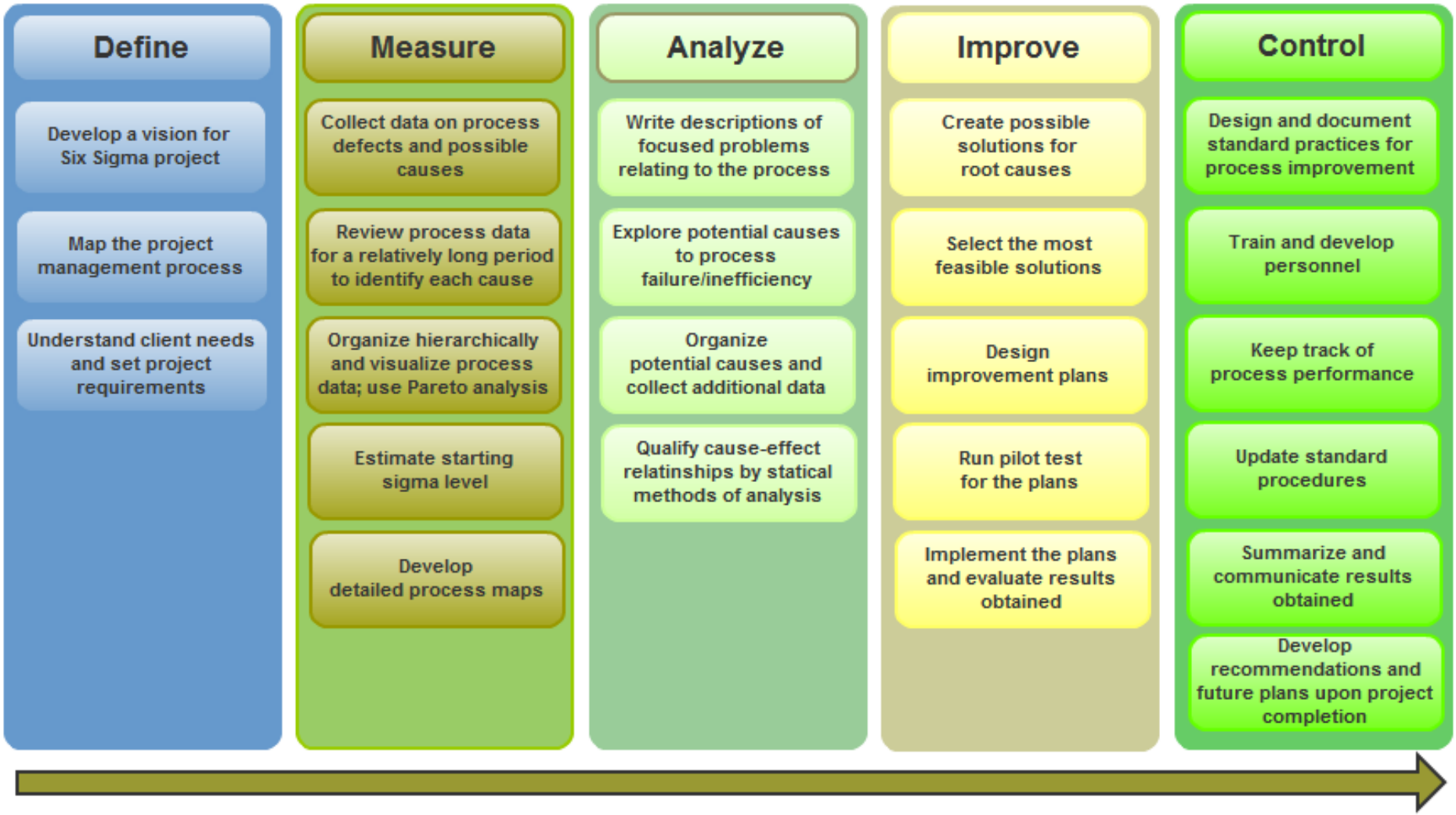
SIX SIGMA METHODLOGY: LEAN MANAGEMENT TOOLS



Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://leansixsigmagroep.nl/en/lean-agile-and-six-sigma/what-is-lean-six-sigma/

DMAIC cycle, Six Sigma Project Management Roadmap



Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://mymanagementguide.com/basics/six-sigma-project-management-definition-cycle-success-factors/

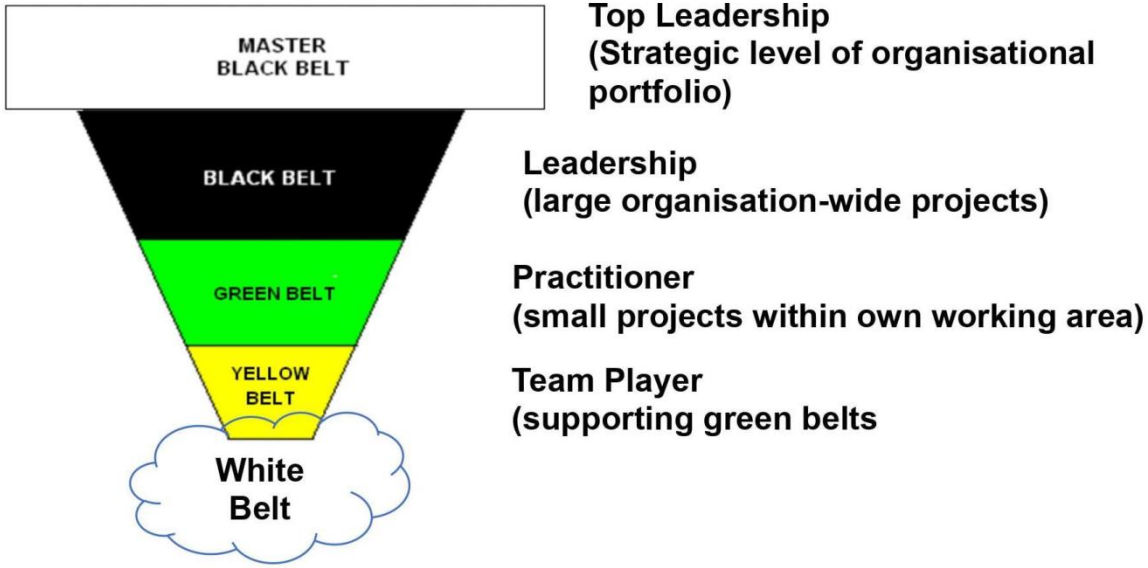
LEAN VS SIX SIGMA

LEAN SIX SIGMA FUSION – TWO RELATED DISCIPLINES		
	LEAN	**SIX SIGMA**
Focus	Improve system efficiency	Improve process effectiveness
	- Improve workflow	- Reduction of variation in outputs
	- Stability of processes	
Goal	Eliminate waste	Reduce defective outputs
Emphasis	Deliver value to customer	Quality to customer
Some Tools	5S, Muda (Waste), Flow & Pull, Kaizen, Kanban, Value-Add Analysis, Value Stream Mapping	Critical to Quality, Defects Per Million Opportunities (DPMO), Failure Mode Effects Analysis (FMEA), Pareto, Statistics
Some Shared Tools	Cause and Effect Diagrams, Process Mapping, Standardised Work, Visual Controls	

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://makewayglobal.com/lean-six-sigma-what-is/

LEADERSHIP WITH SIX SIGMA CYCLE



Six Sigma method is becoming more and more popular among managers that tend to find a solution that combines a robust quality improvement methodology with a sound project management process.

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://makewayglobal.com/lean-six-sigma-what-is/

HOW TO CHOOSE THE RIGHT PROJECT MANAGEMENT METHODOLOGY

Agile	Kanban	Lean	Waterfall	Six Sigma
Agile project management methodology provides flexible, iterative design and build process.	Tasks are represented visually on a board, allowing team members to see the state of every piece of work at any time.	Lean is a problem-solving tool for eliminating wastes and removing wasteful activities that don't add value to the process.	Waterfall provides a simple framework for planning projects. Tasks are in sequential order. The team completes one task or step then performs the next step	Six Sigma is a method that provides organizations tools to improve the capability of their business processes.

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://www.projectcubicle.com/project-management-methodologies/project-management-methodologies-comparison-min/

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TOTAL PROJECT MANAGEMENT (TQM) FRAMEWORK

TQM focuses on

- Project quality control
- project and processes quality assurance
- Company processes
- Project total quality management.

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

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TOTAL PROJECT MANAGEMENT (TQM) FRAMEWORK

Total (T): Involving the whole organization and every aspect of its business.
Quality (Q): Fulfilling customer needs and expectations all the time.
Management (M): Empowering everyone in the organization to achieve high quality results.

Total = sum / whole / entirety

Quality = excellence / superiority / worth

Management = art and science of controlling / organizing / directing

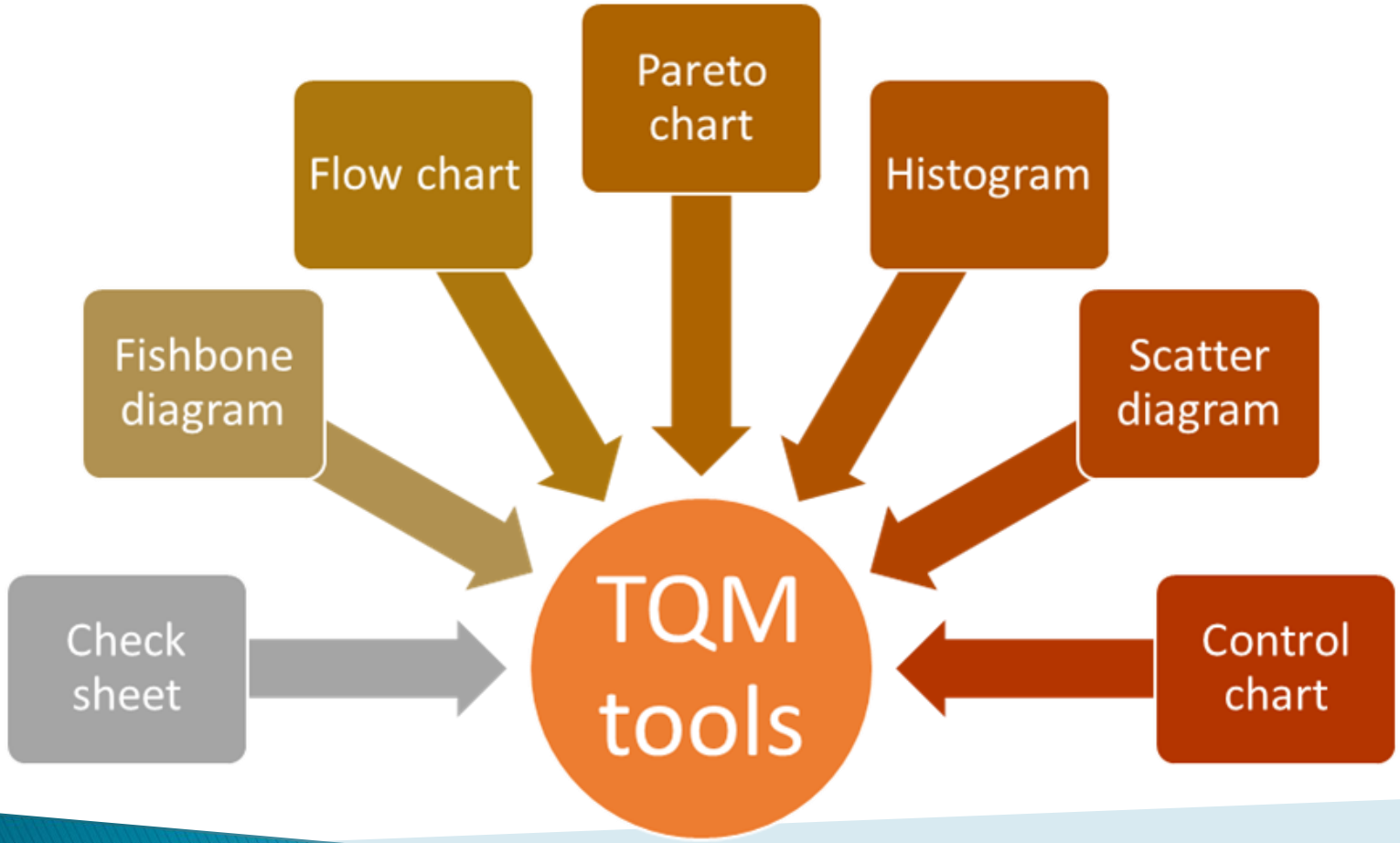
Six basic principles of TQM:

1. Leadership – committed to quality
2. Customers – focus on customer satisfaction and delight
3. Employees – involvement of all
4. Suppliers – maintaining true relations
5. Continuous quality improvement – ongoing incremental steps towards quality
6. Performance measures – management by fact

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://www.researchgate.net/figure/Six-basic-principles-of-TQM_fig1_216521116

TOTAL PROJECT MANAGEMENT (TQM) TOOLS



Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

https://www.researchgate.net/figure/Six-basic-principles-of-TQM_fig1_216521116

REAL WORLD PROBLEMS OF IT PROJECT IMPLEMENTATION

- World as black and white. They often feel that there are bad software teams without a formal process, and good teams that have one in place. But the world is not that simple!
- Teams can be effective without a formal software process: Teams can consist of "jack-of-all-trades" programmers who understand the business of the organization. "Skunk works" programmers may often take initiative and build useful software without input. A highly capable development manager may be willing to put in an enormous effort.
- Many companies produces software always without a formal process
  It's just not formal, or documented and repeatable
  And teams without a formal process can be happy and productive when they can point to their successes!, Except when their projects fail.
- A team without a formal process does not scale up easily.
  Programmers who used to produce lots of software find that their projects have started to feel "bogged down".

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

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MANAGER LEADERSHIP: MANAGING OUTSOURCING PROJECT STRATEGY

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

Rao, R. (2008). Outsourcing project management services: an emerging opportunity. Paper presented at PMI® Global Congress 2008—Asia Pacific, Sydney, New South Wales, Australia. Newtown Square, PA: Project Management Institute.

https://www.pmi.org/learning/library/outsourcing-project-management-services-7150

HINTS: MANAGER LEADERSHIP: MANAGING OUTSOURCING PROJECT STRATEGY

Prevent Project Failure

- Don't be a hands-off client, communicate project goals (The vendor's goals always differ from the clients, Don't expect the team to ignore the vendor's goals, keep an equal or greater priority rule for us
- Transparency is especially important in an outsourced project.

Estimate the Work

- Vendors often estimate the work as part of contract negotiation to unrealistic estimates.

Actively Manage the Project

- Do not be hands-off project manager, with weekly meetings and follow-up, have to know the team.

Build a relationship with the vendor's management

- goals,trust , responsilities

Build a relationship with the team

Plan and manage the project scope

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HINTS: MANAGER LEADERSHIP: MANAGING OUTSOURCING PROJECT STRATEGY

Build a relationship with the team

Keep the leadership with your team

Do a plan and manage the project scope

The project starts with a scope and a budget with a set of known resources. Plan for knowledge transfer.

Recognize that success for the project manager and success for the vendor are often two different things.

Don’t depend on the vendor to maintain the project plan and project schedule

keep track of its status, hold reviews and inspections

Use a collaborative inspection process that has been optimized for outsourced projects.

Don’t delegate the entire design and programming of the project to the vendor

Establish design constraints early on, monitor the code base using code reviews and project automation.

Take responsibility for the quality of the software

Keep Quality with QA team. Give them adequate time and budge.

FINAL is Don’t Blindly Trust the Vendor

Lecturer. Tuyatsetseg Badarch, PhD. Associate professor

PROJECT CLOSURE SET

PMBOK Process Groups

Initiating

Define a new project or a new phase of an existing project.

- Appoint project manager.
- Assess and define the scope and goals of the project.

Planning

Establish project scope and objectives, and define how to meet objectives.

- Develop a workflow to ensure that teams meet vital benchmarks for project completion.
- Establish scope at a more granular level.
- Assess checkpoints.
- Measure and allocate project materials.
- Consider timetables.

Executing

Complete defined work.

- Manage teams.
- Monitor timelines.
- Ensure project stays within budget and timeframe.
- Balance stakeholder involvement.
- Ensure that each step of the project is leading toward the stated outcomes from the initiating phase.

Monitoring and Controlling

Track, review, and regulate the progress.

- Track progress and address any challenges that arise.
- Measure project execution against project planning and project outcomes.
- Review budget and reassess costs.
- Ensure dependent processes are on schedule.

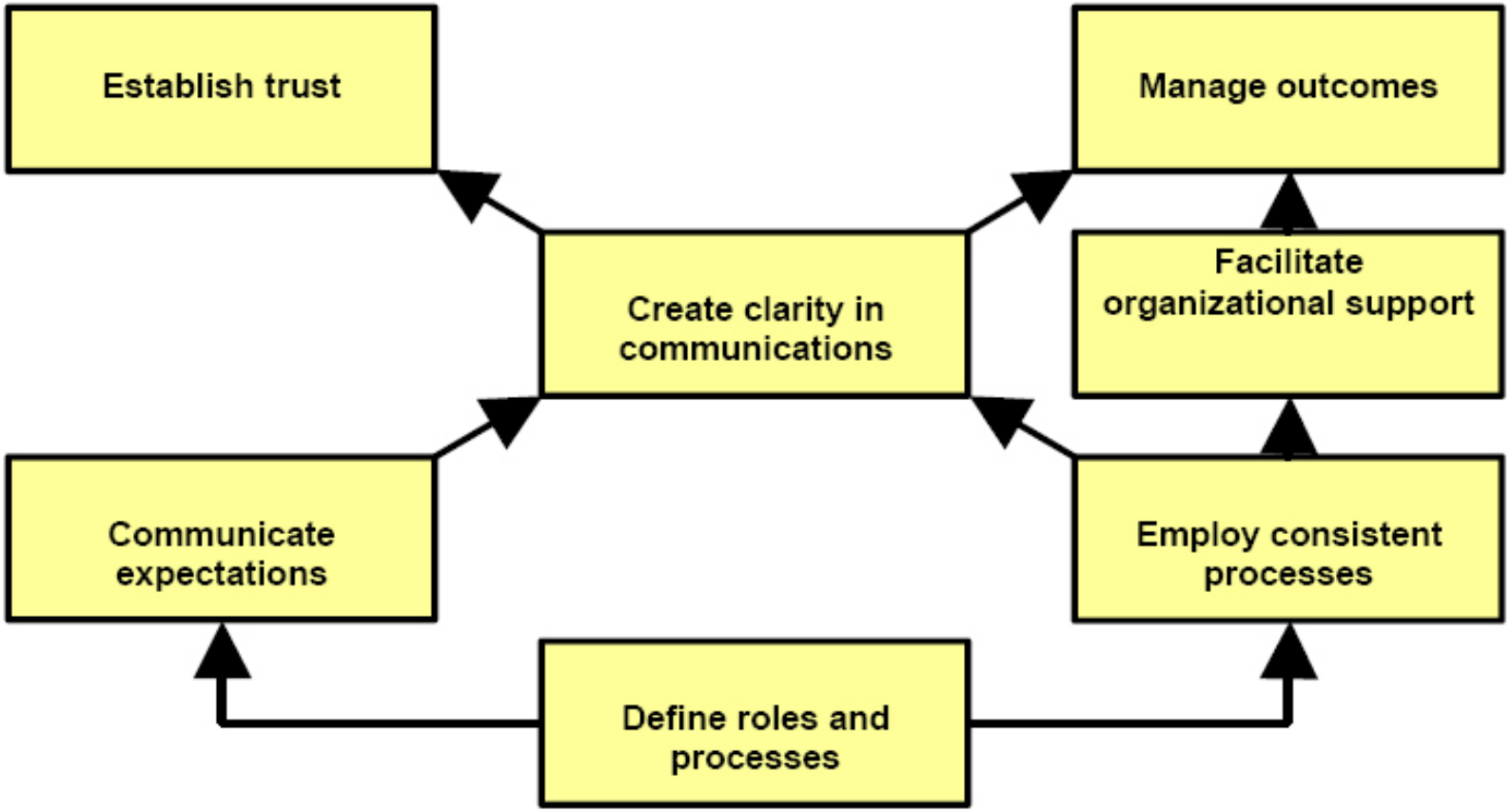
Closing

Formally close the project.

- Determine if project was completed within budget and on time.
- Perform due diligence for necessary processes.
- Assess the strengths and weaknesses of the project.
- Identify key teammates and hand out awards.

https://www.lucidchart.com/blog/nailing-the-project-management-closure-process

LEADER ATTRIBUTES OR MANAGER ATTRIBUTES MODEL



Lecturer. Tuyatsetseg Badarch
PhD. Associate professor

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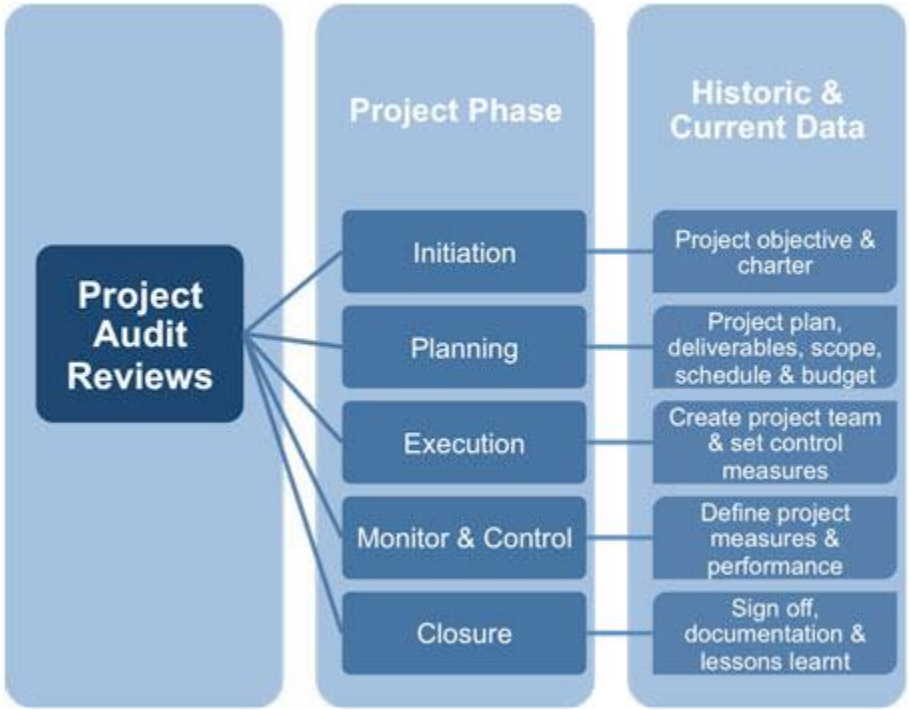
PROJECT QUALITY AUDIT UNDER MANAGER CONTROL

- The audit report presents the major concerns of the project stakeholders, sponsor and team members.
- It also presents recommendations of how flaws, issues and concerns could be overcome to keep the project on track.



Lecturer. Tuyatsetseg Badarch
PhD. Associate professor

http://www.free-management-ebooks.com/faqpm/quality-07.htm

THANK YOU