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# Continuous Improvement Toolkit

## **Project Charter**

## Managing Risk

PDPC

FMEA RAID Logs

Fault Tree Analysis

Risk Assessment\*

Decision Tree

Traffic Light Assessment

Lean Measures

KPIs

OEE

Capability Indices

MSA

RTY

Descriptive Statistics

Cost of Quality

Probability Distributions

ANOVA

Reliability Analysis

Graphical Analysis

Hypothesis Testing

## Understanding Performance

Run Charts

Scatter Plot

Correlation

Regression

Bottleneck Analysis

Visual Management

Control Charts

5 Whys

Chi-Square Test

Multi-Vari Charts

Flow

Value Analysis

5S

Benchmarking

Sampling

Fishbone Diagram

Relations Mapping\*

Wastes Analysis

SMED

Focus groups

Interviews

Brainstorming

Analogy

SCAMPER\*\*\*

Time Value Map

Process Redesign

Photography

Check Sheets

Nominal Group Technique

Mind Mapping\*

IDEF0

Value Stream Mapping

SIPOC

Measles Charts

Surveys

Affinity Diagram

Attribute Analysis

Flow Process Chart

Process Mapping

Data Collection

Critical Incident Technique

Lateral Thinking

Visioning

Flowcharting

Service Blueprints

Observations

## Creating Ideas\*\*

## Designing & Analyzing Processes

## Deciding & Selecting

Pros and Cons

Importance-Urgency Mapping

Break-even Analysis

Cost -Benefit Analysis

Force Field Analysis

Pugh Matrix

Voting

SWOT

QFD

Matrix Diagram

TPN Analysis

Kano Analysis

Prioritization Matrix

Critical-to Tree

Paired Comparison

Cause & Effect Matrix

Pareto Analysis

Confidence Intervals

## Understanding Cause & Effect

Probability Distributions

ANOVA

Graphical Analysis

Hypothesis Testing

Design of Experiments

Run Charts

Scatter Plot

Correlation

Regression

Bottleneck Analysis

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Observations

## Creating Ideas\*\*

## Designing & Analyzing Processes

## Planning & Project Management\*

RACI Matrix

Stakeholders Analysis

PEST

PERT/CPM

Activity Diagram

Roadmaps

Project Charter

Gantt Chart

PDCA

Control Planning

Gap Analysis

Hoshin Kanri

Kaizen

How-How Diagram

Tree Diagram\*\*

Standard work

Simulation

TPM

## Identifying & Implementing Solutions\*\*\*

Mistake Proofing

Pull Systems

JIT

Ergonomics

Work Balancing

Automation

Bottleneck Analysis

Visual Management

Flow

Value Analysis

5S

Wastes Analysis

SMED

Time Value Map

Process Redesign

IDEF0

Value Stream Mapping

SIPOC

Flow Process Chart

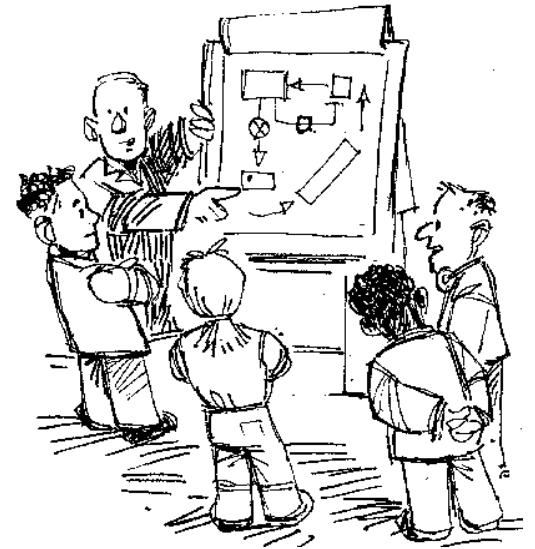
Process Mapping

Flowcharting

Service Blueprints

# - Project Charter

- ❑ It is a one page document that is used to summarize the findings of the project definition.
- ❑ It is critical for obtaining leadership commitment to provide the necessary resources.
- ❑ It enables all the stakeholders to review the project and commit to it.
- ❑ It is used to establish formal project approval processes.



# - Project Charter

- It should provide clear answers to the following questions:
  - **What** must be done?
  - **Why** doing it?
  - **When** must it be done?
  - **Where** must it be done?
  - **Who** does what?
    - Who is behind the project?
    - Who is responsible for the success of the project?
    - Who is funding the project?
    - Who is performing the work?



# - Project Charter

What  
Why  
When  
Where  
Who

<b>Project:</b> _____	
<hr/>	
<b><u>Project Information</u></b>	<b><u>Process Importance</u></b>
Leader: _____	_____
Master Black Belt: _____	_____
Project Start: _____	_____
Project End: _____	_____
Cost of Poor Quality: _____	_____
<b><u>Team Members</u></b>	<b><u>Process Problem</u></b>
Sponsor: _____	_____
Black Belt: _____	_____
Master Black Belt: _____	_____
Subject Matter Experts: _____	_____
_____	_____
_____	<b><u>Project Goals</u></b>
_____	_____
_____	_____
<b><u>Process Start/Stop</u></b>	<b><u>Process Measurements</u></b>
Start Point: _____	_____
_____	_____
Stop Point: _____	_____
_____	_____
<b><u>Project Time-Frame</u></b>	
Milestone: _____	
Date: _____	

# - Project Charter

- Any improvement activity/project can be progressed using one of the following approaches:
  - Just-do / quick wins.
  - Kaizen.
  - **Lean.**
  - **Six Sigma.**
  - **Traditional Project Management (PM).**



# - Project Charter

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## Why Project Succeed?

- ❑ Project Sponsorship at executive level.
- ❑ **Relevant and customer-focused project charter.**
- ❑ Sound project management skills and practices.
- ❑ The right mix of team players.
- ❑ Good decision making structure.
- ❑ Good communication.
- ❑ Team members are working toward common goals.



# - Project Charter

## Benefits:

- ❑ One page document that enables all the stakeholders to review the project and commit to support.
- ❑ Establishes a shared understanding of the project scope and objectives.
- ❑ Specifies necessary resources and boundaries that will in turn ensure success of the project.
- ❑ Focuses on areas that are within the strategic scope of the organization.
- ❑ Communicates objectives to those outside the project team.





# - Project Charter

## A Typical Project Charter Contains:

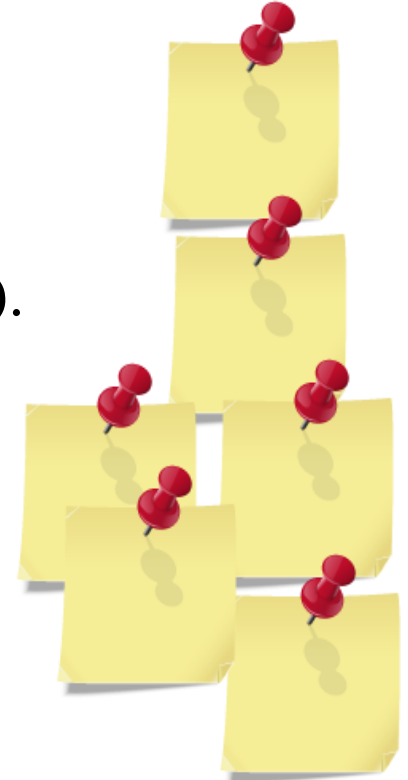
- ❑ Project title.
- ❑ Project leader.
- ❑ Project team.
- ❑ Problem and goal statements.
- ❑ Project scope.
- ❑ Project start and completion dates.
- ❑ Voice of the customer.
- ❑ Kips and project metrics (including the big Y).
- ❑ Signatures (the project sponsor, the process owner, the project leader, a financial representative).



# - Project Charter

## Optional Elements:

- ❑ Project approach.
- ❑ Other project stakeholders.
- ❑ Cost of poor quality.
- ❑ Financial analysis (e.g.: cost and benefit analysis).
- ❑ SIPOC.
- ❑ Critical to quality characteristics.
- ❑ Defect definition
- ❑ Risks, assumptions, issues and dependencies.
- ❑ Deliverables.
- ❑ Required resources.
- ❑ Milestones.

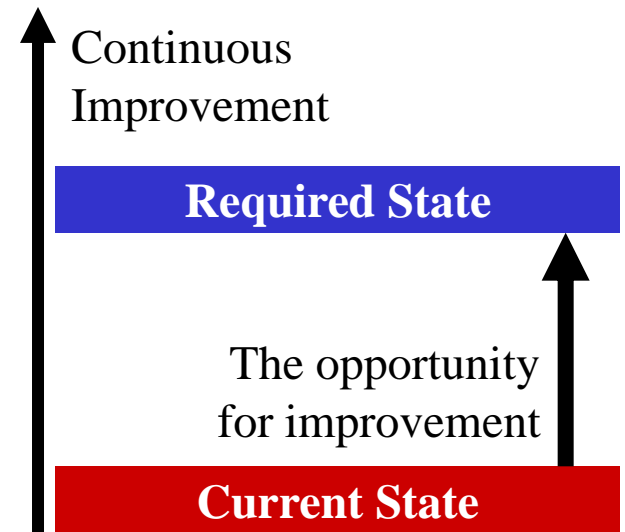


# - Project Charter

## Problem Statement:

- ❑ A problem exists when there is a difference between where we are and where we want to be.
- ❑ A brief, but specific, description of the problem.
- ❑ They should clearly explain:
  - What the problem is?
  - When and how often it occurs?
  - What is the impact/cost is when it occurs?
- ❑ No problem means No improvement!

There is always room for improvement



# - Project Charter

## Goal Statement:

- ❑ The goal statement responds to the problem statement and defines the target for the project.
- ❑ Should be as brief and should not use technical language.
- ❑ The SMART checklist can help:
  - **S:** Specific.
  - **M:** Measurable.
  - **A:** Achievable.
  - **R:** Results Orientated.
  - **T:** Time bounded.



# - Project Charter

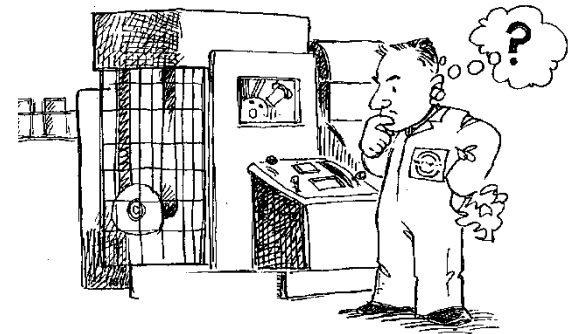
## Example:

### ❑ Problem Statement:

- Oil Refilling System using drums in line 3 for bodymakers & coppers is time consuming, difficult to observe and record oil consumption per machine and difficult to control oil losses which are 5% per each drum.

### ❑ Goal Statements:

- Improve the oil refilling system for line 3 for bodymakers and coppers before March '07 and reduce the time consumed for manual handling, and have better control on the oil consumption and reduce oil losses to 0%.



# - Project Charter

## Project Scope:

- ❑ What is involved?
- ❑ Have the **boundaries** of the project been clearly defined?
- ❑ The more specific the details the less a project may experience.
- ❑ **Define:**
  - Products, services, processes.
  - Departments and units.
  - Locations, areas.
  - Customers and suppliers.



# - Project Charter

## The Project Sponsor:

- ❑ The Project Sponsor is the individual (often a manager or executive) with overall accountability for the project.
- ❑ **A project sponsor:**
  - Ensures the alignment of the project with the strategic priorities.
  - Assigns the different roles in preparing for the project.
  - Obtains funding and resources.
  - Manages conflicts and resolve issues.
  - Approves costs, deliverables, schedules and outcome.



# - Project Charter

## The Project Leader:

Provide Purpose

Plan

Establish shared ownership

Lead and Facilitate

Motivate and Inspire

Communicate and Engage

Monitor

Track and Complete on time





# - Project Charter

## **The Project Team Members:**

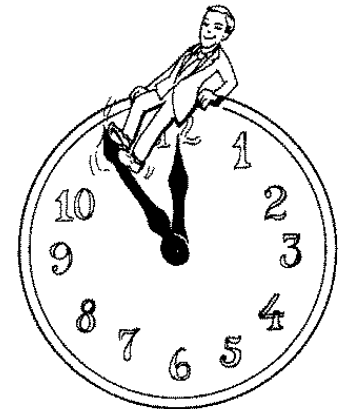
- ❑ Ensure all the relevant processes are represented in the team that you select.
- ❑ Pick the right people and don't just end up with those available.
- ❑ Don't include too many people, you can always call in additional support at the right time.
- ❑ Select people who are trained on basic improvement tools and techniques.



# - Project Charter

## Project Time-Frame:

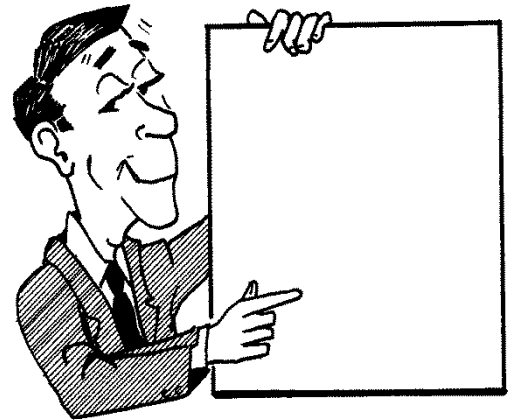
- ❑ In the project charter, it will only be possible to assign approximate completion date.
- ❑ Milestones are essential part of any project as they ensure clear deliverables at every stage.
- ❑ Milestones also provide regular opportunities to review progress:
- ❑ Key points for successful review:
  - The whole project team should be involved.
  - Other stakeholders should be present (e.g. the sponsor).
  - Provide summary to date.
  - Allow time for questions.
  - Present next steps clearly.



# - Project Charter

## Characteristics of a Good Project Charter:

- ❑ It should be clear.
- ❑ It should be concise (Not more than 2 pages).
- ❑ It should be developed by consensus.
- ❑ It should be customer focused.
- ❑ It should contain realistic and achievable objectives.
- ❑ It should be a live document and reviewed and updated on a regular basis.



# - Project Charter

## Example:

<b><u>PROJECT NAME:</u></b>		
◆ <b>Linkage to Strategic Plan or Regulatory Requirements:</b>		
◆ <b>Problem Statement:</b>		<b>Goal/Benefits:</b>
◆ <b>Scope:</b>		<b>Deliverables:</b>
◆ <b>Resources Required:</b>		
<b><u>KEY METRIC(S):</u></b>		
<b><u>MILESTONES:</u></b>		
	<b>Description</b>	<b>Date</b>
	#1	
	#2	
	#3	

Executive Sponsor:

Improvement Leader:

Process Owner:

# - Project Charter

## Example:

<b>Project:</b> _____	
<hr/> <hr/>	
<b><u>Project Information</u></b>	<b><u>Process Importance</u></b>
Leader: _____	_____
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<b><u>Project Time-Frame</u></b>	<b><u>Process Measurements</u></b>
Milestone: _____	_____
Date: _____	_____
_____	_____

# - Project Charter

## Example:

"Project Title"			
<b>1. Problem Statement</b> (A brief, but specific description of the problem)		<b>2. Goal Statement</b> (Defines the target for the project)	
<b>3. Project Leader</b> (Black Belt, Green Belt, Project Manager)		<b>4. Project Approach</b> (Six Sigma, Lean, Kaizen, Just-do)	
<b>5. Project Team</b>		<b>6. Stakeholders</b> (Any party who may have an interest in the project)	
Name	Role	Name	Role
<b>7. Voice of the Customer (VOC)</b> (Identify the key Customers & their needs)		<b>8. Critical to Quality (CTQ)</b> (Characteristics important to customers)	
<b>9. Metrics / KPIs</b> (Unit of measure)		<b>10. The Big Y</b> (The key metric to improve)	
<b>11. Scope of the Project</b> (What is involved and what is not in terms of products, departments, locations, processes etc...)			
<b>12. Estimated Financial Benefits / Cost of Poor Quality (COPQ)</b>		<b>13. Defect</b> (Definition, levels, costs)	
<b>14. Assumptions / Constraints / Risks / Dependencies</b>			
<b>15. Start Date</b>		<b>16. Estimate Completion Date</b>	
<b>17. Signatures</b> (The Signatures of the people below document approval of the formal Project Charter)			
(The Project Leader is empowered by this charter to proceed with the project as outlined in the charter)			
<b>Position/Title</b>	<b>Title/Printed Name/Signature</b>		<b>Date</b>
Project Leader			
Project Sponsor / Champion			
Process Owner			
Other Stakeholders			

# - Project Charter

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## **Further Information:**

- ❑ The rapid pace at the beginning of the project indicates that the project has the support and the resources it needs to succeed.
- ❑ Sometimes the project should be stopped at the beginning:
  - The potential benefits might not be sufficient.
  - The availability of resources might be an issue.
  - What else?

# - Project Charter

## Project Closure

- ❑ An important part of the overall project lifecycle and the bookend to the project charter.
- ❑ It brings things to the ended state in a formal approved way.
- ❑ All projects are designed for a specific period of time and the process of project closure is an important aspect of project management.
- ❑ Used as the formal hand-off of the project to the process owners.
- ❑ It is important to keep this information and inject the knowledge into other projects.

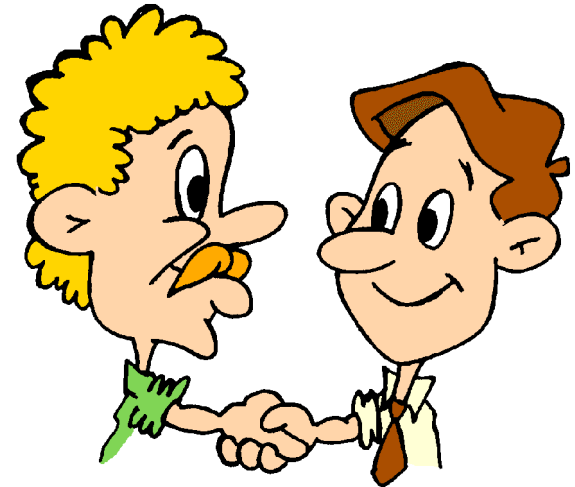




# - Project Charter

## Project Closure:

- ❑ A formal report that is created to formalize how successfully the project has performed against:
  - Project objectives.
  - Original business case.
  - Project plan, scope, budget and allocated timeframes.
- ❑ At this stage, a formal acceptance from the main stakeholders is gained to indicate their sign-off on the project.



# - Project Charter

## **The Purpose of the Formal Closing of the Project:**

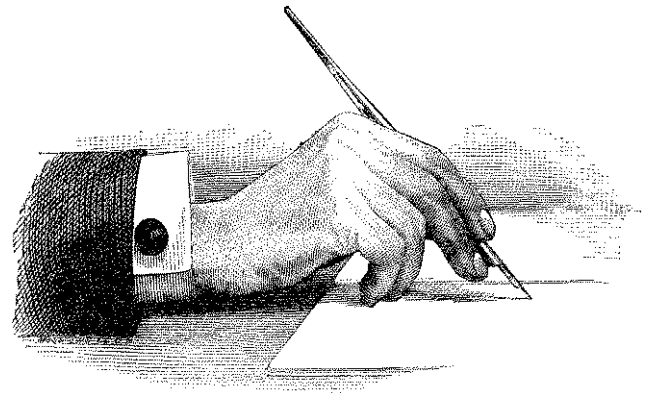
- ❑ To address all issues generated by the project.
- ❑ To release staff from the project.
- ❑ To go through the best practices and the lessons learnt.
- ❑ To provide references to the control activities.



# - Project Charter

## Project Closure Tips:

- ❑ A good practice is to obtain signature of an independent group to confirm that the controls are:
  - In place.
  - Verifiable.
  - Sufficient to assure that the project benefits will continue to accrue.
- ❑ Once the project is completed, the project team might come together for what is called a Project Review Meeting.



# - Project Charter

## Example:

Project Closure		
Project (Number/Name):		Project leader:
Process/Product:		Date of completion:
Project description:		Last updated:
Project Deliverables	Relevant Documents	Owner
Benefits	Controls In Place	Owner
Financial Benefits:		
Defect Level (Initial/Final):		
Signatures	Comments	Date
Project Manager:		
Process Owner:		
Quality Systems / EHS:		
Financial:		
Management/Project Sponsor:		