Continuous Improvement Toolkit

Improvement Roadmap
The Continuous Improvement Map

Managing Risk
- PDPC
- FMEA
- RAID Log*
- Risk Analysis*
- Fault Tree Analysis
- Traffic Light Assessment
- Lean Measures
- OEE
- Process Yield
- Capability Indices
- Gap Analysis*
- Bottleneck Analysis
- Reliability
- MSA

Understanding Performance**
- Benchmarking***
- Data collection planner*
- Check Sheets**
- Interviews
- Questionnaires
- Focus Groups
- Observations
- Suggestion Systems
- Data Collection

Selecting & Decision Making
- Break-even Analysis
- Quality Function Deployment
- Payoff Matrix
- Decision Tree
- Critical-to X
- Kano
- Cost of Quality*
- Project KPIs
- Descriptive Statistics
- Probability Distributions
- Histograms
- Graphical Methods
- Run Charts
- Control Charts
- Brainstorming
- Affinity Diagrams
- Mind Mapping*
- Five Ws
- Group Creativity

Planning & Project Management*
- Importance Urgency Matrix
- Cost Benefit Analysis
- Delphi Method
- TPN Analysis
- Voting
- Four Field Matrix
- Force Field Analysis
- Portfolio Matrix
- Paired Comparison
- Pugh Matrix
- Prioritization Matrix
- A3 Thinking
- Standard Work
- Document control
- Improvement Roadmaps
- Daily Planning
- PERT/CPM
- MOST
- RACI Matrix
- Activity Networks
- SWOT Analysis
- Stakeholder Analysis
- Project Charter
- PDCA
- Policy Deployment
- Gantt Charts
- DMAIC
- Kaizen Events
- Control Planning
- Best Practices
- Implementing Solutions***
- TPM
- Automation
- Mistake Proofing
- Health & Safety
- Simulation
- Just in Time
- 5S
- Quick Changeover
- Visual Management
- Product Family Matrix
- Flow
- Pull
- Spaghetti**
- Process Redesign
- Waste Analysis**
- Value Stream Mapping**
- Value Analysis**
- Process Mapping
- Flow Process Charts**
- Time Value Map**
- Flowcharting
- IDEF0
- Service Blueprints

Understanding Cause & Effect
- ANOVA
- DOE
- Multi-variate Studies
- Chi-Square
- Hypothesis
- Nonparametric
- Scatter Plots
- Correlation
- Regression
- Data Mining
- SIPOC*
- How-How Diagram***
- Tree Diagram*
- Waste Analysis**
- Value Analysis**
- Process Mapping
- Flow Process Charts**
- Time Value Map**
- Flowcharting
- IDEF0
- Service Blueprints

Designing & Analyzing Processes
- Descriptive Statistics
- Process Yield
- Capability Indices
- Gap Analysis*
- Bottleneck Analysis
- Reliability
- MSA
- Data Collection
- Understanding Performance**
- Check Sheets**
- Interviews
- Questionnaires
- Focus Groups
- Observations
- Suggestion Systems
- Data Collection
- Selecting & Decision Making
- Planning & Project Management*
- Managing Risk
- Understanding Cause & Effect
- Implementing Solutions***
Improvement Roadmap

Our long-term continuous improvement effort can be complicated and a never-ending journey

Excellence Journey
Improvement Roadmap

A map can always be helpful in such situations to find the destinations and plan the best routes!

A map is used to understand where we are now, and then helps finding the simplest and fastest way to reach our targets.
Improvement Roadmap

A **road map** is a map that displays business-related information rather than natural geographical information.

There are several different types of roadmaps a business can use including: product, marketing, project, customer experience, change, and improvement roadmaps.
An improvement roadmap is an approach used to achieve improvement. It is used to guide through the implementation of a long-term improvement journey.
Improvement Roadmap

Helps understanding where you are now and where you want to go

It is important that the destination is clear enough and attainable
Improvement Roadmap

Often used to summarize the **strategic plan** in a comprehensive and integrated manner
(Normally on one sheet of paper)

Also used in change management and organizational development projects
Improvement Roadmap

BENEFITS

- Provides an insight toward continuous improvement.
- Illustrates the best possible routes to reach the destination.
- Indicates if you are in the correct way at the right time.
- Ensures everybody is moving forward towards the same goal.

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Improvement Roadmap

There are many ways to construct improvement roadmaps, some of them are long and complicated.

It should be simple to create and easy to follow.
Improvement Roadmap

A good improvement roadmap should answer . . .

Where you are now and where you want to be?

What do you have to do in sequence to be there?

What is the time needed to reach your goals?

What are the alternative routes, if applicable?

What metrics are useful to assess the progress against the established goals?
Improvement Roadmap

A good improvement roadmap tries to **avoid** answering . . .

- **How** will you do it?
- **Who** will do what?
- **How** will you measure the achievement?
- **What** are the detailed activities?
You may present an improvement roadmap in a **timeline** or a **milestone format**

You may think of an improvement road map as a **high-level Gantt chart**
An improvement roadmap in its simplest format contains these four sections:

<table>
<thead>
<tr>
<th>Improvement categories</th>
<th>Where we are now</th>
<th>Where we want to be in ...</th>
<th>Where we want to be in ...</th>
<th>Where we want to be in ...</th>
<th>Metrics</th>
</tr>
</thead>
<tbody>
<tr>
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## Improvement Roadmap

### Improvement Roadmap Template

<table>
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<tr>
<th>Improvement categories</th>
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The focus areas

These are the **categories** where you want to organize your goals such as the leadership style or the problem-solving capabilities within your team.
# Improvement Roadmap

## Improvement Roadmap Template

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Indicates the starting point of the journey for each category

You should **understand** the current condition in order to improve
Improvement Roadmap

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What you need to do in each improvement category and when

It allows to set the milestones and their sequence in order to reach the destination fast and easily

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## Improvement Roadmap

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Each can be considered a project or sub-project for which you have to create an action plan.

The milestones or intermediate targets that will help ensure you are on the right road and route (should be measurable).
# Improvement Roadmap

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The final stage of the roadmap should clearly define the destination for each improvement category.

This represents the end of your journey and the achievement of the improvement goal.
### Improvement Roadmap

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**Allows to monitor performance and assess progress against baseline plans**

Performance metrics should be established and reviewed on a regular basis
## Improvement Roadmap

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<th>Metrics</th>
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<tr>
<td>The focus areas</td>
<td>Indicates the starting point of the journey for each category</td>
<td>What you need to do for each improvement category and when</td>
<td>Allows to monitor performance and assess progress against baseline plans</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Each can be considered a project for which you have to create an action plan.
Improvement Roadmap

How to Construct an Improvement Roadmap

With your team, present the topic and define the purpose of the improvement roadmap

What kind of improvement roadmap are you looking for and what will you use it for?
Establish the **categories** or dimensions in which you want to set your improvement goals

Use categories such as customer, quality, cost, delivery, process, people, leadership, infrastructure, environment, etc.
Improvement Roadmap

How to Construct an Improvement Roadmap

Analyze the **current situation** and where you want to be in the next two or three years

Use tools such as VOC analysis, SWOT analysis and performance analysis
Improvement Roadmap

How to Construct an Improvement Roadmap

Set *improvement goals*, milestones and intermediate targets that will help ensure you are on the right road and route.

Your improvement goals can be anything as long as they are SMART.
Improvement Roadmap

How to Construct an Improvement Roadmap

Establish **performance metrics** for each improvement category

They should provide a clear picture of the overall performance and progress, and allow management to take appropriate actions to move towards the desired destination.
Initiate **improvement projects** and action plans to help you achieve improvement goals

Establish ownership and engagement by the entire team including management
**Improvement Roadmap**

How to Construct an Improvement Roadmap

**Implement** the improvement projects and action plans and apply ongoing measurement

Change the routes as needed throughout your journey keeping the destination in mind
Improvement Roadmap

Action Plans

After setting your goals and creating the roadmap, an action plan per project or per category shall be created.

Helps breaking down big goals into smaller and workable activities, detailing what is needed to be done.
An action plan should be created for each identified improvement project, or for the overall improvement category.
Improvement Roadmap

A good action plan . . .

- Outlines all activities and their order
- Outlines time periods
  - Smaller periods of time
- Identifies issues, obstacles, and where to focus efforts for greater impact
Improvement Roadmap

What is the difference?

A Roadmap
What we want to do . . .

An Action Plan
How we want to do it . . .
# Improvement Roadmap

## Services Example

<table>
<thead>
<tr>
<th>Improvement categories</th>
<th>Where we are now</th>
<th>Where we want to be after the 1st quarter</th>
<th>Where we want to be after the 2nd quarter</th>
<th>Where we want to be after the 3rd quarter</th>
<th>Where we want to be after the 4th quarter</th>
<th>Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teamwork and collaboration in the workplace</td>
<td>Workforce skill level is poor (&gt;33%)</td>
<td>Self-directed work teams in all functions</td>
<td>Work teams are responsible for decision making</td>
<td>15 minutes daily meeting for problem-solving</td>
<td>Discussion of the KPIs in a monthly review meeting</td>
<td>Workforce skill level</td>
</tr>
</tbody>
</table>
| Customer complaints                            | # of customer complaints are higher than industry standards | All customer complaints are coded per type and category | Teams analyze the causes of major complaints | Efforts are being made to reduce the number of complaints | Standards are updated to meet the changing customer requirements | # of customer complaints  
Customer satisfaction index |
## Improvement Roadmap

### Manufacturing Example – Goal Oriented

<table>
<thead>
<tr>
<th>Improvement categories</th>
<th>Where we are now</th>
<th>Where we want to be in 6 months</th>
<th>Where we want to be in 12 months</th>
<th>Where we want to be in 18 months</th>
<th>Where we want to be in 24 months</th>
<th>Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spoilage reduction</td>
<td>Spoilage rate is too high (&gt;8%)</td>
<td>Defect awareness program to all</td>
<td>Breakdown analysis system in place</td>
<td>Spoilage rate less than 5%</td>
<td>Spoilage rate less than 3%</td>
<td>Spoilage rate</td>
</tr>
<tr>
<td>Internal audit development</td>
<td>Internal audit results are less than 60%</td>
<td>Current audit practices reviewed and improved</td>
<td>Audit system covers all functional areas</td>
<td>Audit score above 80%</td>
<td>Audit score above 90%</td>
<td>Audit score</td>
</tr>
<tr>
<td>Workplace organization improvement</td>
<td>Poor workplace organization (&gt; 55%)</td>
<td>5S awareness program to all</td>
<td>5S procedures and practices in place</td>
<td>5S audit score above 75%</td>
<td>5S audit score above 85%</td>
<td>5S audit score</td>
</tr>
</tbody>
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## Improvement Roadmap

### Manufacturing Example – Action Oriented

<table>
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</thead>
<tbody>
<tr>
<td>Spoilage reduction</td>
<td>Spoilage rate is too high (&gt;8%)</td>
<td><strong>Conduct defect awareness program</strong></td>
<td><strong>Develop and implement breakdown analysis system</strong></td>
<td></td>
<td></td>
<td>Spoilage rate</td>
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<tr>
<td>Internal Audit development</td>
<td>Internal audit results are less than 60%</td>
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<td></td>
<td><strong>Review and improve the current audit practices</strong></td>
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<td>Workplace organization improvement</td>
<td>Poor workplace organization (&gt; 55%)</td>
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<td><strong>5S awareness program to all</strong></td>
<td><strong>Implement 5S in all areas</strong></td>
<td>5S audit score</td>
</tr>
</tbody>
</table>
All improvement roadmaps are in fact continuous improvement roadmaps as everything that we do or have done is never perfect.
Improvement Roadmap

Further Information

You may show alternate routes to get where you want to go faster, easier and more effective.
A perfect improvement roadmap should have elements related to **cultural change** along with other categories to enable sustainable continuous improvement.