# Root-Cause Analysis Template

*Root-Cause analysis is used when you have identified a problem or issue that needs to be overcome. It will help you to identify the deeper underlying causes, rather than working on the presenting symptoms or consequences.*

*2 possible methods can be used*

**What is root-cause analysis?**

A root-cause analysis helps to build a deeper understanding of the causes of an issue, rather than symptoms, so that appropriate options and solutions can be identified.

**What does root-cause analysis do?**

* Enables the group or team to focus on the causes of the issue (not its history or differing personal interests).
* Creates a snapshot of our collective knowledge and a consensus around the sources of an issue.
* Focuses the team on deeper causes, not merely the symptoms.

**Verifying root causes using a Cause & Effect diagram**

The below steps are to be completed by a stakeholder group who include: the frontline, subject matter experts and appropriate leadership. You can also watch the video describing these steps at:

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| **STEP 1: Decide on the effect (issue) to be analysed**   * This should be specific and have information on the ‘what’, ‘where’, ‘when’ and ‘how much’. If possible, use data to specify the issue. * Write the issue on a whiteboard/flipchart paper so the whole group can see it.   *For illustration purposes, we will use the example: Late pizza deliveries on Fridays and Saturdays.* |
| **STEP 2: Brainstorm**   * Brainstorm all possible causes using a whiteboard/flipchart. * If there are quite a few causes, decide on the priority of each one by the extent to which it contributes to the issue. You could use priority levels are high, medium or low.   *Following on from the example, this could include: ovens too small, unreliable cars, drivers get lost, people don’t show up, poor handling of large orders, poor dispatching and run out of ingredients.* |
| **STEP 3: Draw a ‘fishbone’ diagram**   * The diagram should look as per below. Allow plenty of space and use a flipchart or whiteboard. * Usually there are 4-6 ‘bones’ but this will depend on the headings you choose. * Insert the ‘Effect’ identified in Step 1.   *Late pizza deliveries on Fridays and Saturdays* |
| **STEP 4: Determine major cause categories**   * Decide on headings for each ‘bone’ – these are the major cause categories. * Examples include: People, procedures, resources, measurement, environment, regulation.   *Following on from the example, we are using: equipment, people, methods, materials.*  **Equipment**  **People**  *Late pizza deliveries on Fridays and Saturdays*  **Materials**  **Methods** |
| **STEP 5: Assign causes to categories**   * Place the highest ranked causes (from those brainstormed) against each of the major ‘bone’ cause categories. * Ask repeatedly of each cause: Why does it happen? This is to really get to the root cause.   *In our example, under the category of People, for the cause ‘People don’t show up’, asking ‘why’ once results in the answer ‘no teamwork’. Asking ‘why’ again results in the answer ‘poor training’.*  **People**  **Equipment**  **People don’t show up**  **Unreliable cars**  Poor training  Poor training  No teamwork  **Drivers get lost**  Poor use of space  Poor training  **Ovens too small**  Low pay  Kids own junks  Get wrong information  *Late pizza deliveries on Fridays and Saturdays*  **Poor dispatching**  **Run out of ingredients**  **Poor handling of large orders**  High turnover  Poor training  High turnover  Don’t know town  Lack of experience  **Methods**  Inaccurate ordering  **Materials** |
| **STEP 6: Look for relationships between causes**   * Look for causes that appear repeatedly within or across major cause categories (see in red and blue below). * This will help in prioritising which ones to deal with first (since this will have the biggest impact). * Collect data to verify the findings *e.g. in the example below collect data on the turnover rate*   **People**  **Equipment**  **People don’t show up**  **Unreliable cars**  Poor training  No teamwork  Poor training  **Drivers get lost**  Poor use of space  Poor training  **Ovens too small**  Low pay  Kids own junks  Get wrong information  *Late pizza deliveries on Fridays and Saturdays*  **Poor dispatching**  **Run out of ingredients**  **Poor handling of large orders**  High turnover  Poor training  High turnover  Don’t know town  Lack of experience  **Methods**  Inaccurate ordering  **Materials** |