

Complete Problem Tree Analysis Guide

What is a Problem Tree?

A Problem Tree is a visual tool that helps you systematically analyze a problem by identifying its root causes and effects. Like a real tree, the roots represent the underlying causes, the trunk is the main problem, and the branches show the resulting effects or consequences.

Step 1: Preparation

Materials Needed:

- Large paper or whiteboard (minimum A3 size)
- Colored markers or pens
- Sticky notes (optional, useful for team exercises)
- Digital tools: Miro, Lucidchart, Canva, or similar

Before You Start:

- Clearly define the scope of your problem
- Gather relevant stakeholders (if it's a group exercise)
- Allocate 1-2 hours for the complete process
- Ensure you have a quiet, distraction-free environment

Step 2: Identify the Core Problem (The Trunk)

Instructions:

1. **Place the main problem** in the center of your page
2. **Write it clearly and specifically** - be precise, not vague
3. **Ensure it's an actual problem**, not the absence of a solution
4. **Make it observable** - something you can measure or verify

Examples of Well-Defined Problems:

-  "Low student engagement in online learning"
-  "High employee turnover in sales department"
-  "Declining customer satisfaction scores"
-  "Lack of training" (this is a cause, not a problem)

- **✗** "Need better communication" (this suggests a solution)

Problem Statement Checklist:

- ☐ Is it specific and measurable?
- ☐ Is it a negative situation that needs addressing?
- ☐ Can multiple people agree this is indeed a problem?
- ☐ Is it within your scope of influence?

Step 3: Identify the Causes (The Roots)

Process:

1. Draw lines downward from the central problem
2. Ask "Why does this problem occur?"
3. Write each cause on a separate root branch
4. For each cause, ask again: "Why does this happen?"
5. Create sub-roots for more specific underlying causes

The "5 Whys" Technique:

Example:

- **Problem:** Low student engagement in online classes
- **Why?** → Students don't turn on their cameras
- **Why?** → They feel self-conscious about their appearance
- **Why?** → They don't have proper lighting or private space
- **Why?** → They're studying from shared family spaces
- **Why?** → Economic constraints limit their housing options

Types of Root Causes to Consider:

- **People-related:** Skills, motivation, behavior
- **Process-related:** Procedures, workflows, systems
- **Environmental:** Physical conditions, resources, tools
- **Organizational:** Policies, culture, structure
- **External:** Market conditions, regulations, competition

Root Cause Categories:

1. **Immediate causes** (direct triggers)
2. **Underlying causes** (systemic issues)
3. **Root causes** (fundamental problems)

Step 4: Identify the Effects (The Branches)

Process:

1. **Draw lines upward** from the central problem
2. Ask **"What are the consequences of this problem?"**
3. **Consider short-term, medium-term, and long-term effects**
4. **Group similar effects** under main branches
5. **Develop sub-branches** for more specific consequences

Types of Effects to Consider:

- **Immediate effects:** What happens right away
- **Medium-term effects:** Consequences over weeks/months
- **Long-term effects:** Lasting impact over years
- **Ripple effects:** Secondary consequences of primary effects

Effect Categories:

- **Individual level:** Personal impact on people involved
- **Organizational level:** Impact on the company/institution
- **Community level:** Broader social consequences
- **Economic impact:** Financial costs and losses
- **Social impact:** Relationships and community effects

Example Effect Analysis:

Problem: Low student engagement in online learning

- **Immediate:** Reduced participation in class discussions
- **Medium-term:** Declining academic performance
- **Long-term:** Lower graduation rates
- **Ripple effect:** Reduced employability of graduates

Step 5: Refinement and Validation

Review Your Tree:

- ☐ Are all important causes included?
- ☐ Do the cause-effect relationships make logical sense?
- ☐ Are there any causes that are actually effects, or vice versa?
- ☐ Can you group or reorganize any causes or effects better?
- ☐ Are the descriptions clear and specific?

Validation Process:

1. **Present the tree** to colleagues or subject matter experts
2. **Ask for feedback** on missing causes or effects
3. **Verify** that the central problem is correctly defined
4. **Test logic** by reading the relationships out loud
5. **Refine** based on input received

Common Issues to Check:

- **Circular logic:** Effect listed as a cause of itself
- **Symptoms vs. causes:** Distinguishing between what you see and why it happens
- **Missing stakeholder perspectives:** Ensuring all viewpoints are considered
- **Level of detail:** Balancing comprehensiveness with clarity

Step 6: Using Your Problem Tree for Decision-Making

Prioritization Framework:

1. **Identify root causes** (the deepest level causes)
2. **Assess your control** over each cause (High/Medium/Low)
3. **Evaluate potential impact** of addressing each cause
4. **Consider available resources** and constraints

Priority Matrix:

Impact/Control	High Control	Medium Control	Low Control
High Impact	ACTION NOW	Plan Strategy	Long-term Goal
Medium Impact	Quick Win	Consider	Monitor

Impact/Control	High Control	Medium Control	Low Control
Low Impact	If Resources Allow	Low Priority	Ignore

Action Planning:

- High Impact + High Control = Immediate action priority
- High Impact + Low Control = Long-term strategic approach
- Medium Impact + High Control = Quick wins if resources available
- Low Impact + Low Control = Monitor only

Step 7: Developing Solutions

From Problem Tree to Solution Tree:

1. Convert negative statements to positive goals
2. Transform causes into solution strategies
3. Use effects to define success indicators

Example Transformation:

- Cause: "Lack of teacher training in online methods"
- Solution: "Comprehensive online teaching certification program"
- Success Indicator: "90% of teachers complete certification within 6 months"

Best Practices and Tips

During the Process:

- Use different colors for causes, problem, and effects
- Don't self-censor in the initial brainstorming phase
- Keep descriptions brief but specific (5-8 words maximum)
- Include diverse perspectives when working in teams
- Take breaks if the session becomes overwhelming

Visual Design Tips:

- Make the trunk prominent - use bold text or highlighting
- Use consistent spacing between branches and roots
- Draw clear connecting lines to show relationships

- Consider using icons or symbols for different types of causes
- Ensure readability - avoid overcrowding

Common Mistakes to Avoid:

- Confusing causes with symptoms
- Making the problem too broad or vague
- Including solutions instead of causes
- Stopping analysis too early
- Ignoring stakeholder input
- Creating overly complex trees that are hard to understand

Digital Template Structure

EFFECTS (BRANCHES - ABOVE THE TRUNK)

```

├── Effect Branch 1
│   ├── Sub-effect 1.1
│   └── Sub-effect 1.2
├── Effect Branch 2
└── Effect Branch 3
  
```

CORE PROBLEM (TRUNK - CENTER)

[MAIN PROBLEM STATEMENT]

CAUSES (ROOTS - BELOW THE TRUNK)

```

├── Root Cause 1
│   ├── Sub-cause 1.1
│   └── Sub-cause 1.2
├── Root Cause 2
│   ├── Sub-cause 2.1
│   ├── Sub-cause 2.2
│   └── Sub-cause 2.3
└── Root Cause 3
  
```

Worksheet Template

Problem Definition:

Main Problem: _____

Stakeholders Affected: _____

Scope/Timeframe: _____

Root Causes Analysis:

1. Why does this problem occur?

- Cause 1: _____
- Cause 2: _____
- Cause 3: _____

2. Why do these causes exist? (Drill deeper)

- Sub-cause 1.1: _____
- Sub-cause 1.2: _____

Effects Analysis:

1. What are the immediate consequences?

- Effect 1: _____
- Effect 2: _____

2. What are the long-term impacts?

- Long-term effect 1: _____
- Long-term effect 2: _____

Priority Assessment:

[illegible]

Follow-Up Actions

After Creating Your Problem Tree:

1. **Document the analysis** - save your tree and notes
2. **Share with stakeholders** for validation and buy-in
3. **Develop action plans** for priority causes
4. **Set up monitoring** systems for key indicators
5. **Schedule regular reviews** to update the analysis

Continuous Improvement:

- **Update the tree** as new information emerges
- **Track progress** on addressing root causes
- **Measure impact** on the effects identified
- **Learn from outcomes** to improve future analysis

This guide provides a comprehensive framework for conducting effective Problem Tree Analysis. Remember, the goal is not just to create a diagram, but to develop deep understanding that leads to effective action.