

Успех это движение от неудачи к неудаче без потери энтузиазма

ЛИН И АДЖАЙЛ НА УРОВНЕ КОМПАНИИ

Сурен Самарчян

Руководитель департамента управления проектами, Иннова Системс

Автор фундаментально нового метода исследования задач быстрой аппроксимации

Эл. почта: approximation@gmail.com

Тел: +79169368701

GOAL

- Learn Enterprise Level Lean&Agile core ideas
- Make at least one positive change tomorrow

WORKING AGREEMENTS

- Consider this seminar as really important
- Think ahead, suggest your solutions
- Ask questions , there are no dumb ones
- Get emotionally involved

AGENDA

- Motivation
- Scrum for management team
- Lean basic concepts
- 14 principles of Lean
- 8 wastes
- Lean product development
- A3 thinking
- Why and What → How

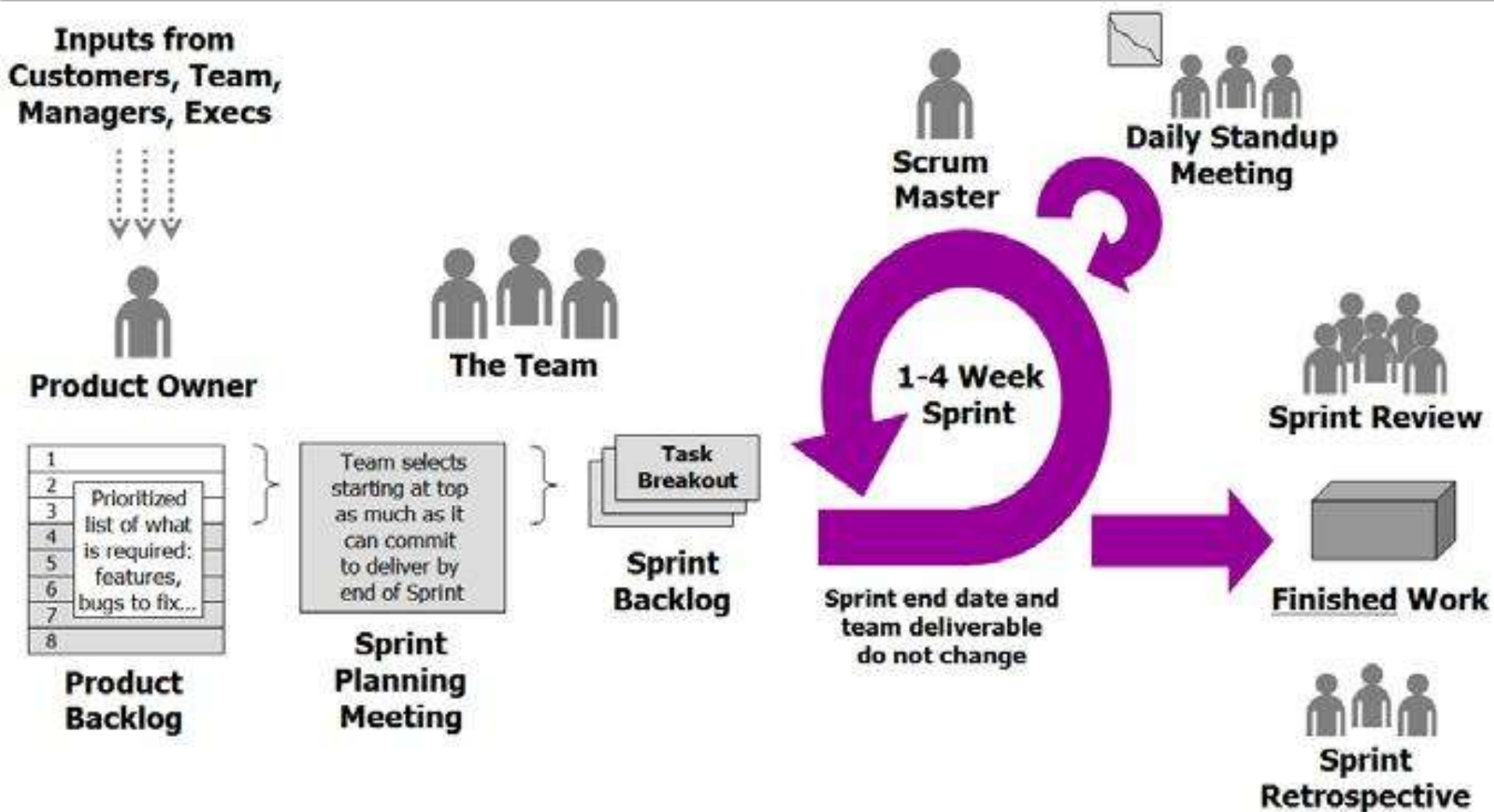
PRAGMATIC MOTIVATION

- More than fifteen years experience showed huge success of Agile for wide range of software development projects
- Google, Yahoo, Nokia, Siemens, British Telecom, Microsoft, Systematic use Agile
- There are many carefully investigated cases when team's productivity is doubled after adopting Agile

MANAGEMENT TEAM (MT)

- Management team's performance is the most influential for the enterprise
- Adoption of Agile & Lean principles for the management team is the most powerful of all
- and the hardest one to implement

SCRUM



Success is going from failure to failure without loss of enthusiasm

SCRUM FOR MANAGEMENT TEAM

- MT Scrum Goal
- MT Scrum Roles
- MT Scrum Artifacts
- MT Scrum Ceremonies

MT-SCRUM GOAL

- Improve the enterprise

MT-SCRUM ROLES

- The most senior executive in the enterprise is the Product Owner
- ScrumMaster must be smart, fearless and the fanatic follower of Lean & Agile principles
- The Team consists of the most influential people in the enterprise, probably heads of departments

MT-SCRUM ARTIFACTS

- The backlog consists of improvement initiatives and impediments
- At the start of a Sprint, the team selects high-value items from the backlog
- The goal of the Sprint is to remove these impediments and to create enterprise change that optimizes productivity and effectiveness

MT-SCRUM DAILY MEETINGS

- The management Scrum team has short and intensive daily meetings
- There is huge amount of information to exchange so relentless and smart facilitation is needed
- Team leaders might also come to MT daily meetings and ask for help in removing important impediments

MT-SCRUM PLANNING

- Product Owner spent enough time last week to be well prepared
- Team selects the highest priority items and make commitment
- Special one-week tactical teams might be created to work on one or more items

MT-SCRUM DEMO

- A Sprint Review is held at the end of every Sprint
- Tangible changes are demonstrated
- Sometimes team might have nothing or very little to demonstrate
- You might need to change team, backlog, process or everything at once

MT-SCRUM RETROSPECTIVE

- Do it once a month for one week iteration
- Question everything
- Start at 17:00 and commit to stay until done
- Doing it out of office with right amount of alcohol might help

LEAN: BASIC CONCEPTS

- Continuous improvement
- Respect people
- Managers-teachers

CONTINUOUS IMPROVEMENT

- Retrospectives
- Go see – pair/peer working, first hand info
- Learn to see problems
- Perfection challenge
- A3 problem solving
- Knowledge sharing

RESPECT PEOPLE

- Don't trouble your customer
- Develop people, then build products
- No wasteful work
- Teams and individuals evolve their own practices and improvements
- Build partners with stable relationships, trust, and coaching in lean thinking
- Develop teams

MANAGERS-TEACHERS

- Key responsibility of management is to teach its people thinking and acting for themselves

LEAN PRINCIPLES: FIRST FOUR

- Base your management decisions on a long-term philosophy, even at the expense of short-term financial goals.
- Create a continuous process flow to bring problems to the surface.
- Use "pull" systems to avoid overproduction.
- Level out the workload

LEAN PRINCIPLES: SECOND FOUR

- Build a culture of stopping to fix problems, to get quality right the first time.
- Standardized tasks and processes are the foundation for continuous improvement and employee empowerment.
- Use visual control so no problems are hidden.
- Use only reliable, thoroughly tested technology that serves your people and processes.

LEAN PRINCIPLES: THIRD FOUR

- Grow leaders who thoroughly understand the work, live the philosophy, and teach it to others.
- Develop exceptional people and teams who follow your company's philosophy.
- Respect your extended network of partners and suppliers by challenging them and helping them improve.
- Go and see for yourself to thoroughly understand the situation

LEAN PRINCIPLES: LAST TWO

- Make decisions slowly by consensus, thoroughly considering all options; implement decisions rapidly
- Become a learning organization through relentless reflection and continuous improvement.

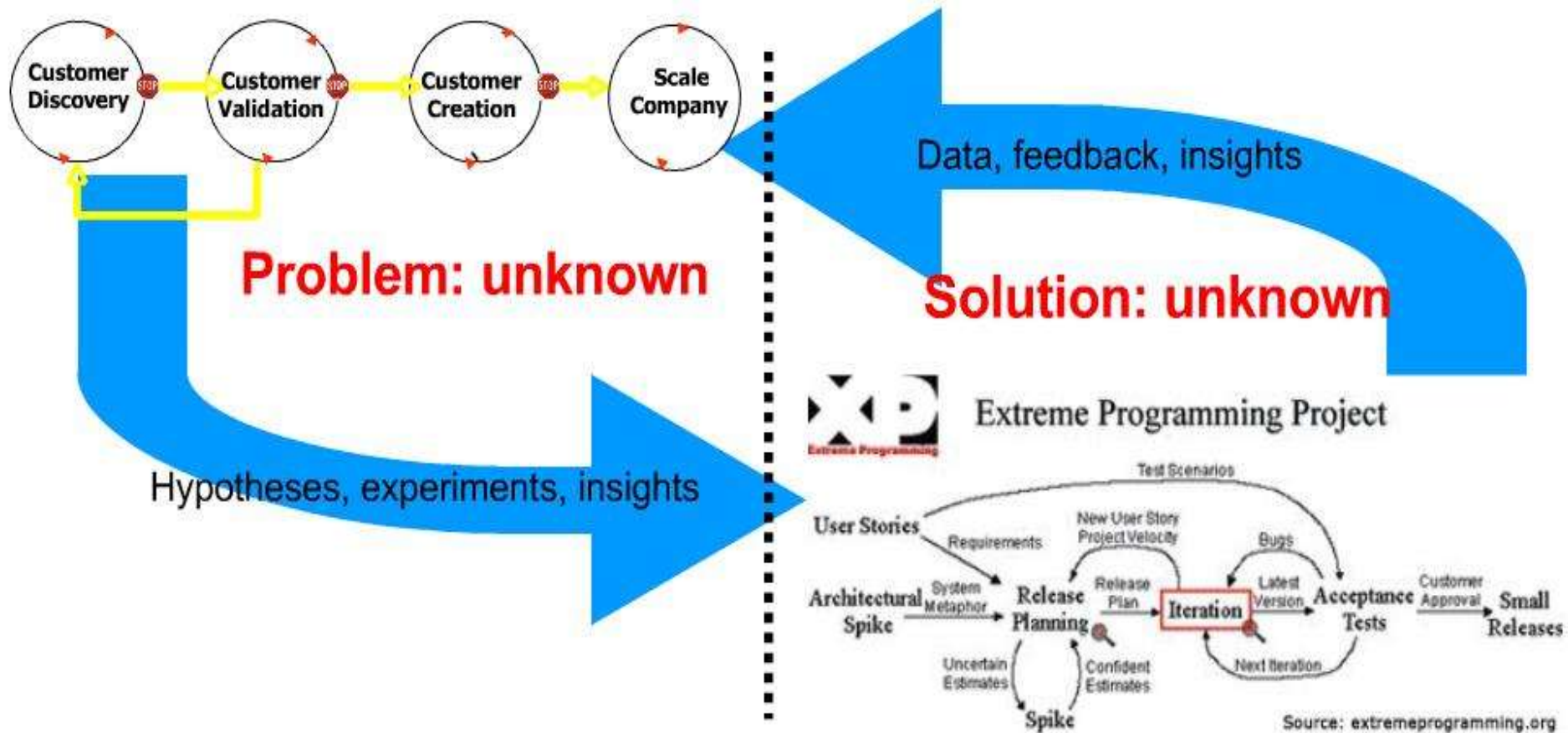
ELIMINATE WASTE

- Overproduction
- Transportation
- Inventory
- Motion
- Defects
- Over-Processing
- Waiting
- Underutilized employees' talents

LEAN PRODUCT DEVELOPMENT

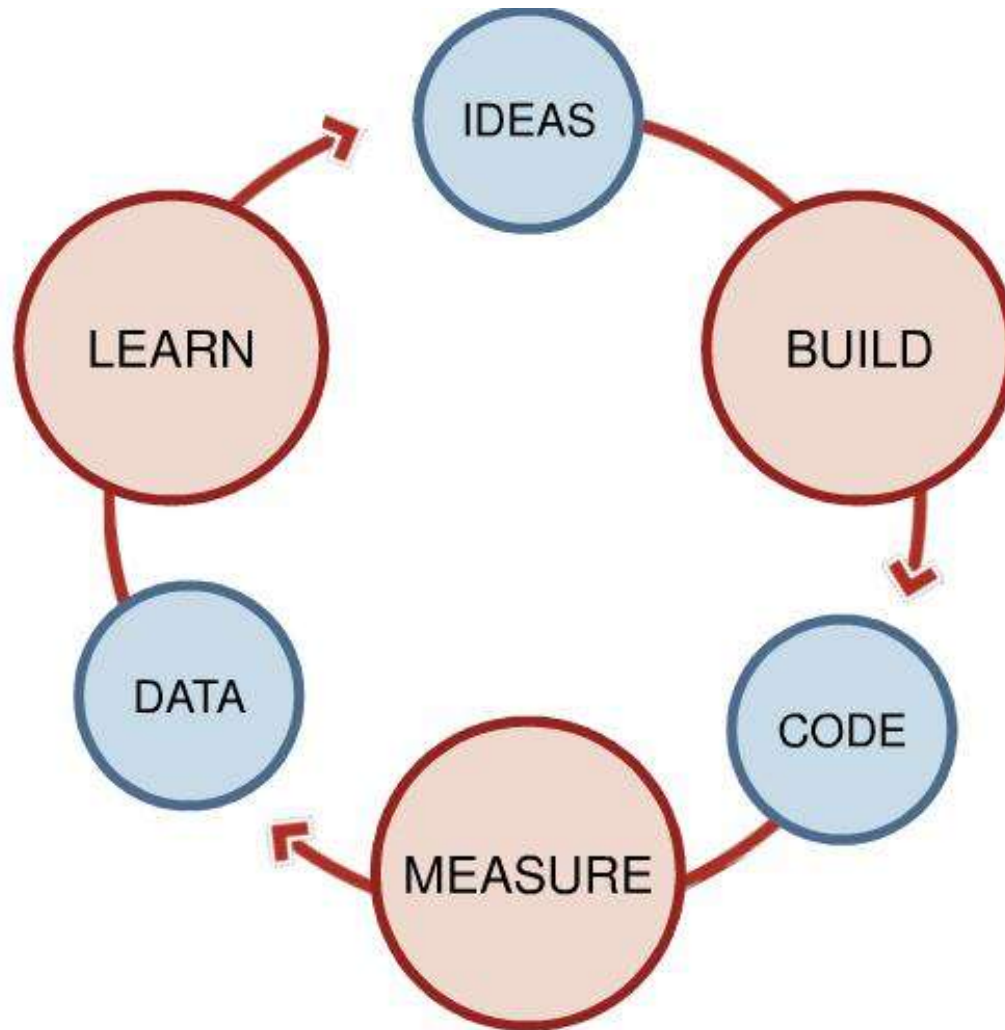
- Long-term great employees
- Long-term cross-functional teams
- Entrepreneur-manager-engineer-teacher
- Cadence
- Team room with visual management
- Set based design
- Maximizing knowledge creation

LEAN PD: UNCERTAINTY



Success is going from failure to failure without loss of enthusiasm

LEAN PD: LEARNING CYCLE



Success is going from failure to failure without loss of enthusiasm

LEAN PD: CUSTOMER RESEARCH

- Multivariate testing
- Usability testing
- Funnel analysis
- Cohort analysis
- Net promoter score
- SEO
- Cause-effect analysis

LEAN

- 3 basic ideas: Continuous improvement, Respect people, Managers-teachers
- 14 principles
- 8 wastes
- Lean product development

CONTINUOUS IMPROVEMENT

- Retrospectives
- Go see – pair/peer working, first hand info
- Learn to see problems
- Perfection challenge
- **A3 problem solving**
- Knowledge sharing

PROBLEM SOLVING CULTURE

- “At Toyota, I had 2000 problem solvers working for me, here I have 10!” – GM plant manager, former Toyota manager
- High performance organizations fully leverage the intelligence of every associate. Every person in your organization should be able to see and solve problems.

PEOPLE DEVELOPMENT IS KEY

- The solutions developed are secondary to the skills and mindset the process creates.

HIDING PROBLEMS

- New manager at Georgetown Kentucky Toyota Plant gave his first status report to the management.
- Managers from Japan looked puzzled when he reported his accomplishment and good results.
- Fujio Cho explains that what they are really interested in is the problems he is encountering so the management team can help him solve them, not his successes which they presume based on his skill as a manager for which he was hired.

A3 TEMPLATE

A3 Problem Solving Template, Example, and Assessment Questions - version 1.1 - By Tom Poppendick and Henrik Kniberg

Background	Plan
<ul style="list-style-type: none"> Why is this important? Why should the reader care about this situation and be motivated to participate in improving? <p>Assessment Questions</p> <ol style="list-style-type: none"> Is there a clear theme for the problem report that reflects the contents? Is the topic relevant to the organization's objectives? Is there any other reason for working on this topic (e.g., learning purposes)? 	
Current Condition	Plan
<ul style="list-style-type: none"> How do things work today? What is the problem? Baseline Metrics? <p>Assessment Questions</p> <ol style="list-style-type: none"> Is the current condition clear and logically depicted in a visual manner? How could the current condition be made clearer for the audience? Is the current condition depiction framing a problem or situation to be resolved? What is the actual problem in the current condition? Are the facts of the situation clear, or are there just observations and opinions? Is the problem quantified in some manner or is it too qualitative? 	
Goal / Target Condition	Plan
<ul style="list-style-type: none"> What outcomes are expected for what reasons? What changes in metrics can be plausibly expected? <p>Assessment Questions</p> <ol style="list-style-type: none"> Is there a clear goal or target? What, specifically, is to be accomplished? How will this goal be measured or evaluated? What will improve, by how much, and when? 	
Root Cause Analysis	Plan
<ul style="list-style-type: none"> What is the root cause(s) of the problem? Use a simple problem analysis tool (e.g., 5 why's, fishbone diagram, cause/effect network) to show cause-and-effect relationships. <p>Assessment Questions</p> <ol style="list-style-type: none"> Is the analysis comprehensive at a broad level? Is the analysis detailed enough and did it probe deeply enough on the right issues? Is there evidence of proper five-whys thinking about the true cause? Has cause and effect been demonstrated or linked in some manner? Are all the relevant factors considered (human, machine, material, method, environment, measurement, and so on)? Do all those who will need to collaborate in implementing the countermeasures agree on the cause/effect model reasoning? 	

Owner: Author leading the problem solving
Mentor: Person guiding and assessing process
Date: Current version Date

Countermeasures (Experiments)	Do
<ul style="list-style-type: none"> Proposed countermeasure(s) to address each candidate root cause. [This should be a series of quick experiments to validate causal model analysis.] Predicted results for each countermeasure. <p>Assessment Questions</p> <ol style="list-style-type: none"> Are there clear countermeasures steps identified? Do the countermeasures link to the root cause of the problem? Are the countermeasures focused on the right areas? Who is responsible for doing what, by when (is 5Why-1 How clear)? Will these action items prevent recurrence of the problem? Is the implementation order clear and reasonable? How will the effects of the countermeasures be verified? 	
Confirmation (Results)	Check
<ul style="list-style-type: none"> Actual result of each countermeasure (experiment). How does the system actually behave with the countermeasures that are being proposed for implementation in place? <p>Assessment Questions</p> <ol style="list-style-type: none"> How will you measure the effectiveness of the countermeasures? Does the check item align with the previous goal statement? Has actual performance moved line with the goal statement? If performance has not improved, then why? What was missed? 	
Follow-up (Actions)	Act
<ul style="list-style-type: none"> What have we learned that does or does not improve the situation? In the light of the learning, what should be done? How should the way we work or our standards be adjusted to reflect what we learned? What do we need to learn next? <p>Assessment Questions</p> <ol style="list-style-type: none"> What is necessary to prevent recurrence of the problem? What remains to be accomplished? What other parts of the organization need to be informed of this result? How will this be standardized and communicated? 	

Success is going from failure to failure without loss of enthusiasm

OWNER, MENTOR, DATE

Owner: Author leading the problem solving

Mentor: Person guiding and assessing process

Date: Current version Date

A3 Problem Solving Template, Example, and Assessment Questions - version 1.1 - By Tom Pappendorf and Henrik Rablens

<p>Background Plan</p> <ul style="list-style-type: none"> Why is this important? Why should the reader care about this situation and be motivated to participate in improving? <p>Assessment Questions</p> <ol style="list-style-type: none"> Is there a clear theme for the problem report that reflects this context? Is the topic relevant to the organization's objectives? Is there any other reason for working on this topic (e.g., learning purposes)? <p>Current Condition Plan</p> <ul style="list-style-type: none"> How do things work today? What is the problem? Baseline Metrics? <p>Assessment Questions</p> <ol style="list-style-type: none"> Is the current condition clear and logically depicted in a visual manner? How could the current condition be made clearer for the audience? Is the current condition depiction framing a problem or situation to be resolved? What is the actual problem in the current condition? Are the facts of the situation clear, or are there just observations and opinions? Is the problem quantified in some manner or is it too qualitative? <p>Goal / Target Condition Plan</p> <ul style="list-style-type: none"> What outcomes are expected for what reason? What changes in metrics can be possibly expected? <p>Assessment Questions</p> <ol style="list-style-type: none"> Is there a clear goal or target? What, specifically, is to be accomplished? How will the goal be measured or evaluated? What will inspire, by how much, and when? <p>Root Cause Analysis Plan</p> <ul style="list-style-type: none"> What is the root cause(s) of the problem? Use a simple problem analysis tool (e.g., 5 why's, Ishikawa diagram, cause-effect networks) to show cause-and-effect relationships. <p>Assessment Questions</p> <ol style="list-style-type: none"> Is the analysis comprehensive or a broad level? Is the analysis detailed enough and did it probe deeply enough on the right issues? Is there evidence of proper thinking about the root cause? Has cause and effect been demonstrated or linked in some manner? Are all the relevant factors considered (Quality, quantity, material, method, environment, measurement, and so on)? Do all those who will need to collaborate in implementing the countermeasures agree on the cause-effect model (recording)? 	<p>Owner: Author leading the problem solving</p> <p>Mentor: Person guiding and assessing process</p> <p>Date: Current version Date</p> <hr/> <p>Countermeasures (Experiments) Do</p> <ul style="list-style-type: none"> Prepared countermeasures(s) to address each candidate root cause. (This should be a series of small experiments to validate causal model analysis.) Predicted results for each countermeasure. <p>Assessment Questions</p> <ol style="list-style-type: none"> Are there clear countermeasure steps (identified)? Do the countermeasures fix to the root cause of the problem? Are the countermeasures focused on the right aspect? Who is responsible for doing what, by when (is SWHY) (How clear)? Will these action items prevent recurrence of the problem? Is the implementation order clear and rationalized? How will the effects of the countermeasures be verified? <hr/> <p>Confirmation (Results) Check</p> <ul style="list-style-type: none"> Actual result of each countermeasure (experiment). How does the system actually behave with the countermeasures that are better prepared for implementation in place? <p>Assessment Questions</p> <ol style="list-style-type: none"> How will you measure the effectiveness of the countermeasures? Does the check item align with the previous goal statement? Has actual performance moved (up) with the goal statement? If performance has not improved, then why? What was missed? <hr/> <p>Follow-up (Actions) Act</p> <ul style="list-style-type: none"> What have we learned that does or does not improve the situation? In the field of the learning, what should be done? How should the way we work or our standards be adjusted to reflect what we learned? What do we need to learn next? <p>Assessment Questions</p> <ol style="list-style-type: none"> What is necessary to prevent recurrence of the problem? What remains to be accomplished? What other parts of the organization need to be informed of this result? How will this be standardized and communicated?
---	--

Success is going from failure to failure without loss of enthusiasm

OWNER LEADS

- Meeting is led and written by owner.
- Owner pulls the authority to implement countermeasures and update team standards.
- It is the responsibility of the owner to gain consensus on the contents of each section among all those the mentor believes need to be involved in either understanding the problem or solving it.

MENTOR GUIDES

- Usually owner's manager
- Coaches and critiques
- Know what questions to ask
- Examines and guides the owners thinking with the primary goal of developing the collaborative problem solving and learning capabilities of the owner and the secondary goal of helping the owner come up with a good solution to the problem.

MENTOR CHECKS

- Ensure that the owner does not jump to conclusions unsupported by the data presented so far.
- Ensure that the owner has discussed the situation, the cause and effect modeling, and the proposed countermeasures in sufficient detail and with a sufficient number of people to have good confidence that the changes proposed will work.

BACKGROUND

Background

Plan

- Why is this important?
- Why should the reader care about this situation and be motivated to participate in improving?

Assessment Questions

1. Is there a clear theme for the problem report that reflects the contents?
2. Is the topic relevant to the organization's objectives
3. Is there any other reason for working on this topic (e.g., learning purposes)?

A3 Problem Solving Template, Example, and Assessment Questions - version 1.1 - © Tom Poppendieck and Henrik Kabera

<p>Background _____ Plan</p> <ul style="list-style-type: none"> • Why is this important? • Why should the reader care about this situation and be motivated to participate in improving? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is there a clear theme for the problem report that reflects the contents? 2. Is the topic relevant to the organization's objectives? 3. Is there any other reason for working on this topic (e.g., learning purposes)? 	<p>Owner: Author leads the problem solving</p> <p>Mentor: Person guiding and assessing process</p> <p>Date: Current version Date</p>
<p>Current Condition _____ Plan</p> <ul style="list-style-type: none"> • How do things work today? • What is the problem? • Baseline Metrics? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is the current condition clear and logically depicted in a visual manner? 2. How could the current condition be made clearer for the audience? 3. Is the current condition depiction framing a problem or situation to be resolved? 4. What is the actual problem in the current condition? 5. Are the facts of the situation clear, or are there just observations and opinions? 6. Is the problem quantified in some manner or is it too qualitative? 	<p>Countermeasures (Experiments) _____ Do</p> <ul style="list-style-type: none"> • Prepared countermeasures to address each candidate root cause. (This should be a series of small experiments to validate several small ones.) • Predicted results for each countermeasure. <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Are there clear countermeasures steps identified? 2. Do the countermeasures link to the root cause of the problem? 3. Are the countermeasures focused on the right causal? 4. Who is responsible for doing what, by when (i.e. 5W/1H)? How clear? 5. Will those action items prevent recurrence of the problem? 6. Is the implementation order clear and reasonable? 7. How will the effects of the countermeasures be verified?
<p>Goal / Target Condition _____ Plan</p> <ul style="list-style-type: none"> • What outcomes are required for what reason? • What changes in metrics can be plausibly expected? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is there a clear goal or target? 2. What, specifically, is to be accomplished? 3. How will this goal be measured or evaluated? 4. What will improve, by how much, and when? 	<p>Confirmation (Results) _____ Check</p> <ul style="list-style-type: none"> • Actual result of each countermeasure (experiment). • How does the system actually behave with the countermeasures that are being prepared for implementation in place? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. How will you measure the effect/impact of the countermeasure? 2. Does the check item align with the previous goal statement? 3. Has actual performance moved (in) line with the goal statement? 4. If performance has not improved, then why? What was missed?
<p>Root Cause Analysis _____ Plan</p> <ul style="list-style-type: none"> • What is the root cause(s) of the problem? • Use a simple problem analysis tool (e.g., 5 why's, fishbone diagram, cause/effect network) to show cause-and-effect relationships. <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is the analysis comprehensive at a broad level? 2. Is the analysis detailed enough and did it probe deeply enough on the right issues? 3. Is there evidence of proper first-why thinking about the true cause? 4. Has cause and effect been demonstrated or linked in some manner? 5. Are all the relevant factors considered (human, machine, material, method, environment, measurement, and so on)? 6. Do all those who will need to collaborate in implementing the countermeasures agree on the cause/effect model reasoning? 	<p>Follow-up (Actions) _____ Act</p> <ul style="list-style-type: none"> • What have we learned that does or does not improve the situation? • Is the right of the learning, what should be done? • How should the way we work or our standards be adjusted to reflect what we learned? • What do we need to learn next? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. What is necessary to prevent recurrence of the problem? 2. What remains to be accomplished? 3. What other parts of the organization need to be informed of this result? 4. How will this be standardized and communicated?

Success is going from failure to failure without loss of enthusiasm

CURRENT CONDITIONS

Current Condition

Plan

- How do things work today?
- What is the problem?
- Baseline Metrics?

Assessment Questions

1. Is the current condition clear and logically depicted in a visual manner?
2. How could the current condition be made clearer for the audience?
3. Is the current condition depiction framing a problem or situation to be resolved?
4. What is the actual problem in the current condition?
5. Are the facts of the situation clear, or are there just observations and opinions?
6. Is the problem quantified in some manner or is it too qualitative?

All Problem-Solving Templates, Examples, and Assessment Questions (version 1.1) by Tom Ichniowski and Chuck Palanski

<p>Background Plan</p> <ul style="list-style-type: none"> • Why is this important? • Why should the reader care about this situation and be motivated to participate in improving it? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is there a clear theme for the problem report that reflects the content? 2. Is the topic relevant to the organization's objectives? 3. Is there any other reason for writing on this topic (e.g., learning purposes)? 	<p>Owner: Author/leader of the problem solution</p> <p>Planner: Process analysis and innovation process</p> <p>Date: Current version date</p>
<p>Current Condition Plan</p> <ul style="list-style-type: none"> • How do things work today? • What is the problem? • Baseline Metrics? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is the current condition clear and logically depicted in a visual manner? 2. How could the current condition be made clearer for the audience? 3. Is the current condition depiction framing a problem or situation to be resolved? 4. What is the actual problem in the current condition? 5. Are the facts of the situation clear, or are there just observations and opinions? 6. Is the problem quantified in some manner or is it too qualitative? 	<p>Countermeasures (Experiments) Do</p> <ul style="list-style-type: none"> • Prepared assessment(s) to address each countermeasure separately (the checklist version of each countermeasure to evaluate overall results) • Prepared goals for each countermeasure. <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Are there clear countermeasures steps identified? 2. Do the countermeasures fit in the current state of the problem? 3. Are the countermeasures focused on the right aspect? 4. What is responsible for doing this by when (SMART-like clear)? 5. Will these actions have a greater likelihood of solving the problem? 6. Is the implementation order clear and sequential? 7. How will the effects of the countermeasures be verified?
<p>Goal / Target Condition Plan</p> <ul style="list-style-type: none"> • What outcomes are expected for other issues? • What outcomes are needed to be successfully completed? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is there a clear goal to target? 2. What, specifically, is to be accomplished? 3. How will the goal be measured or verified? 4. What will improve, by how much, and what? 	<p>Confirmation (Results) Check</p> <ul style="list-style-type: none"> • How well do each countermeasure (experiment) meet the current needs? • How does the system actually behave with the countermeasures that are being proposed for implementation in total? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. How well did you measure the effectiveness of the countermeasures? 2. Does the data from steps with the previous goal statement? 3. Did actual performance exceed the goal statement? 4. If performance has not improved, how/why? What was revised?
<p>Next Steps Analysis Plan</p> <ul style="list-style-type: none"> • What is the next step(s) of the problem? • How to create a simple problem-solving tool (e.g., Ishikawa's fishbone diagram, cause-effect network) to show cause-and-effect relationships. <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is the analysis comprehensive or is it biased to one? 2. Is the analysis detailed enough and did it probe deeply enough on the right issue? 3. Is there evidence of greater focus on thinking about the root cause? 4. How could and what have been identified? (Identify in some manner) 5. Are all the relevant factors considered (human, machine, material, method, environment, measurement, and so on)? 6. Do all those who will need to collaborate in implementing the countermeasures agree on the issues affected under discussion? 	<p>Follow-up (Action) Act</p> <ul style="list-style-type: none"> • What have we learned that does or does not improve the situation? • In the light of the lessons, what should be done? • How should the way we work with our standard be adjusted to reflect what we learned? • What do we need to learn next? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. What is necessary to prevent recurrence of the problem? 2. What needs to be accomplished? 3. How could and what have been identified? (Identify in some manner) 4. What other parts of the organization need to be informed of this result? 5. How will it be measured and communicated?

Success is going from failure to failure without loss of enthusiasm

BACKGROUND&CURRENT STATE

- Title, Background, Current Conditions
- The beginning of problem solving is understanding how the work works which is the context in which problems occur.
- If your answer is that your work is chaotic, that there is no regular way you do your work, this is an important insight.
- A value stream map is often helpful to communicate current conditions.
- This part should be written well to motivate people to invest energy to go on.

GOAL / TARGET CONDITIONS

Goal / Target Condition

Plan

- What outcomes are expected for what reasons?
- What changes in metrics can be plausibly expected?

Assessment Questions

1. Is there a clear goal or target?
2. What, specifically, is to be accomplished?
3. How will this goal be measured or evaluated?
4. What will improve, by how much, and when?

A3 Problem Solving Template, Example, and Assessment Questions - version 1.1 - By Tom Pappadakis and Heidi Kahana

<p>Background Plan</p> <ul style="list-style-type: none"> • Why is this important? • Why should the reader care about this situation and be motivated to participate in improving? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is there a clear theme for the problem report that reflects the content? 2. Is the topic relevant to the organization's objectives? 3. Is there any other reason for working on this topic (e.g., learning purposes)? 	<p>Owner: Author leading the problem solving</p> <p>Mentor: Person assisting and assessing process</p> <p>Date: Current revision Date</p>
<p>Current Condition Plan</p> <ul style="list-style-type: none"> • How do things work today? • What is the problem? • Baseline Metrics? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is the current condition clear and logically depicted in a visual manner? 2. How could the current condition be made clearer for the audience? 3. Is the current condition depiction framing a problem or situation to be resolved? 4. What is the causal problem in the current condition? 5. Are the facts of the situation clear, or are there just observations and opinions? 6. Is the problem quantified in some manner or is it too qualitative? 	<p>Countermeasures (Experiments) Do</p> <ul style="list-style-type: none"> • Prepared countermeasure(s) to address each candidate root cause. (This should be a series of quick experiments to validate causal model analysis.) • Predicted results for each countermeasure. <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Are there clear countermeasure steps identified? 2. Do the countermeasures link to the root cause of the problem? 3. Are the countermeasures focused on the right causal? 4. Who is responsible for doing what, by when (i.e. 2019.1) How clear? 5. Will these action items prevent recurrence of the problem? 6. Is the implementation order clear and reasonable? 7. How will the effects of the countermeasures be verified?
<p>Goal / Target Condition Plan</p> <ul style="list-style-type: none"> • What outcomes are expected for what reasons? • What changes in metrics can be plausibly expected? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is there a clear goal or target? 2. What, specifically, is to be accomplished? 3. How will this goal be measured or evaluated? 4. What will improve, by how much, and when? 	<p>Confirmation (Results) Check</p> <ul style="list-style-type: none"> • Actual result of each countermeasure (experiment). • How does the actual result(s) compare with the countermeasures that are being prepared for implementation in place? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. How will you measure the effect/ status of the countermeasure? 2. Does the result align with the previous goal statement? 3. Has actual performance moved (in) with the goal statement? 4. If performance has not improved, then why? What was missed?
<p>Root Cause Analysis Plan</p> <ul style="list-style-type: none"> • What is the root cause of the problem? • Use a simple problem analysis tool (e.g., 5 wh's, Fishbone diagram, cause-effect network) to show cause-and-effect relationships. <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. Is the analysis comprehensive or a broad level? 2. Is the analysis detailed enough and did it probe deeply enough on the right level? 3. Is there evidence of proper five-whys thinking about the true cause? 4. Has cause and effect been demonstrated or linked in some manner? 5. Are all the relevant factors considered (human, machine, material, method, environment, measurement, and so on)? 6. Do all those who will need to collaborate in implementing the countermeasures agree on the cause/effect model reasoning? 	<p>Follow-up (Actions) Act</p> <ul style="list-style-type: none"> • What have we learned that does or does not improve the situation? • Is the light of the learning, what should be done? • How should the way we work or our standards be adjusted to reflect what we learned? • What do we need to learn next? <p>Assessment Questions</p> <ol style="list-style-type: none"> 1. What is necessary to prevent recurrence of the problem? 2. What remains to be accomplished? 3. What other parts of the organization need to be informed of this result? 4. How will this be standardized and communicated?

Success is going from failure to failure without loss of enthusiasm

GOAL

- Effort to change will be motivated if the improvement expected is enough better than the current condition to make a real difference.
- If you do not understand the situation well enough to predict how much you can improve the situation, you do not understand it well enough to make changes.
- This is where the mentor must insist and where many people trying to do PDCA go astray.

ROOT-CAUSE ANALYSIS

Root Cause Analysis

Plan

- What is the root cause(s) of the problem?
- Use a simple problem analysis tool (e.g., 5 why's, fishbone diagram, cause/effect network) to show cause-and-effect relationships.

Assessment Questions

1. Is the analysis comprehensive at a broad level?
2. Is the analysis detailed enough and did it probe deeply enough on the right issues?
3. Is there evidence of proper five-whys thinking about the true cause?
4. Has cause and effect been demonstrated or linked in some manner?
5. Are all the relevant factors considered (human, machine, material, method, environment, measurement, and so on)?
6. Do all those who will need to collaborate in implementing the countermeasures agree on the cause/effect model reasoning?

A3 Problem Solving Template, Examples, and Assessment Questions - version 3.1 - By Tom Poppendick and Rick Kubicz

Background	Plan	Overview: Analyze the problem within the context of the organization's objectives.
<ul style="list-style-type: none"> 1. Why is this happening? 2. Why should the reader care about this situation and be motivated to participate in improving? 	<ul style="list-style-type: none"> 1. How do these conditions affect the customer? 2. How do these conditions affect the organization? 3. How do these conditions affect the team? 	Methods: Process analysis and mapping process
Assessment Questions	Check	Date: _____
<ul style="list-style-type: none"> 1. Is the current condition clear and logically depicted in a visual manner? 2. How do these conditions affect the customer? 3. How do these conditions affect the organization? 4. How do these conditions affect the team? 	<ul style="list-style-type: none"> 1. Are there clear countermeasures that are identified? 2. Do the countermeasures link to the root cause of the problem? 3. Are the countermeasures focused on the right issues? 4. Who is responsible for doing what by when (5W3H)? (How clear) 5. Will these actions have prevent recurrence of the problem? 6. Are the countermeasures error-free and repeatable? 7. How will the effects of the countermeasures be verified? 	Countermeasures (Expectations):
Goal / Target Conditions	Act	Follow-up (Actions):
<ul style="list-style-type: none"> 1. What actions are required for what reasons? 2. How do these conditions affect the customer? 3. How do these conditions affect the organization? 4. How do these conditions affect the team? 	<ul style="list-style-type: none"> 1. How have we learned that these actions will improve the situation? 2. In the long run, what should be done? 3. How do we know we are working on our standards for what we are looking for? 4. How do we know we are working on our standards for what we are looking for? 	<ul style="list-style-type: none"> 1. What is necessary to prevent recurrence of the problem? 2. What remains to be accomplished? 3. How do we know that the organization has been informed of this result? 4. How will this be standardized and communicated?
Root Cause Analysis		
<ul style="list-style-type: none"> 1. How do these conditions affect the customer? 2. How do these conditions affect the organization? 3. How do these conditions affect the team? 		

Success is going from failure to failure without loss of enthusiasm

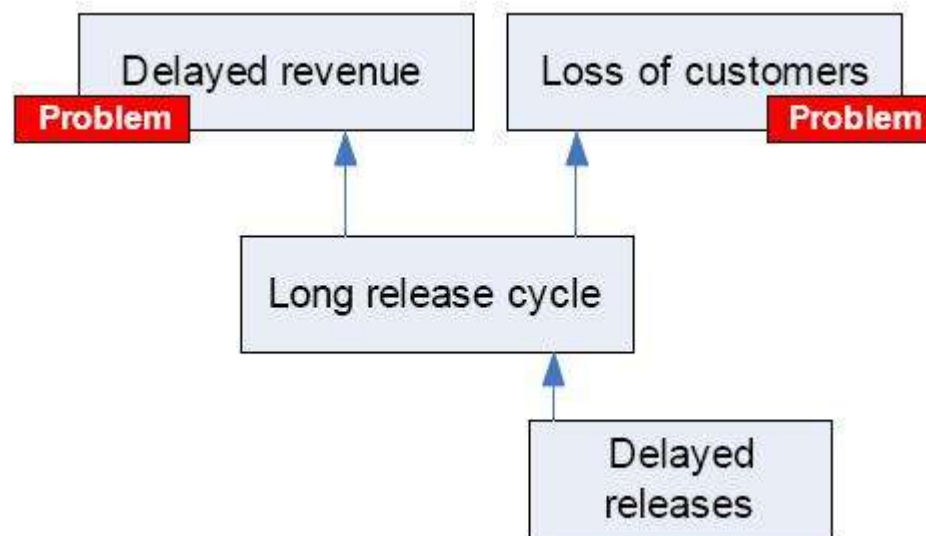
ROOT-CAUSE ANALYSIS

- Techniques for root-cause analysis: 5 whys, Ishikawa diagram, cause effect diagram, current reality tree
- Build agreement among stakeholders on cause and effect network
- Finding the root cause is all about taking responsibility
- Root-cause model is not sufficient if you cannot describe how you will know if the change was helpful and estimate how much improvement you expect from each countermeasure

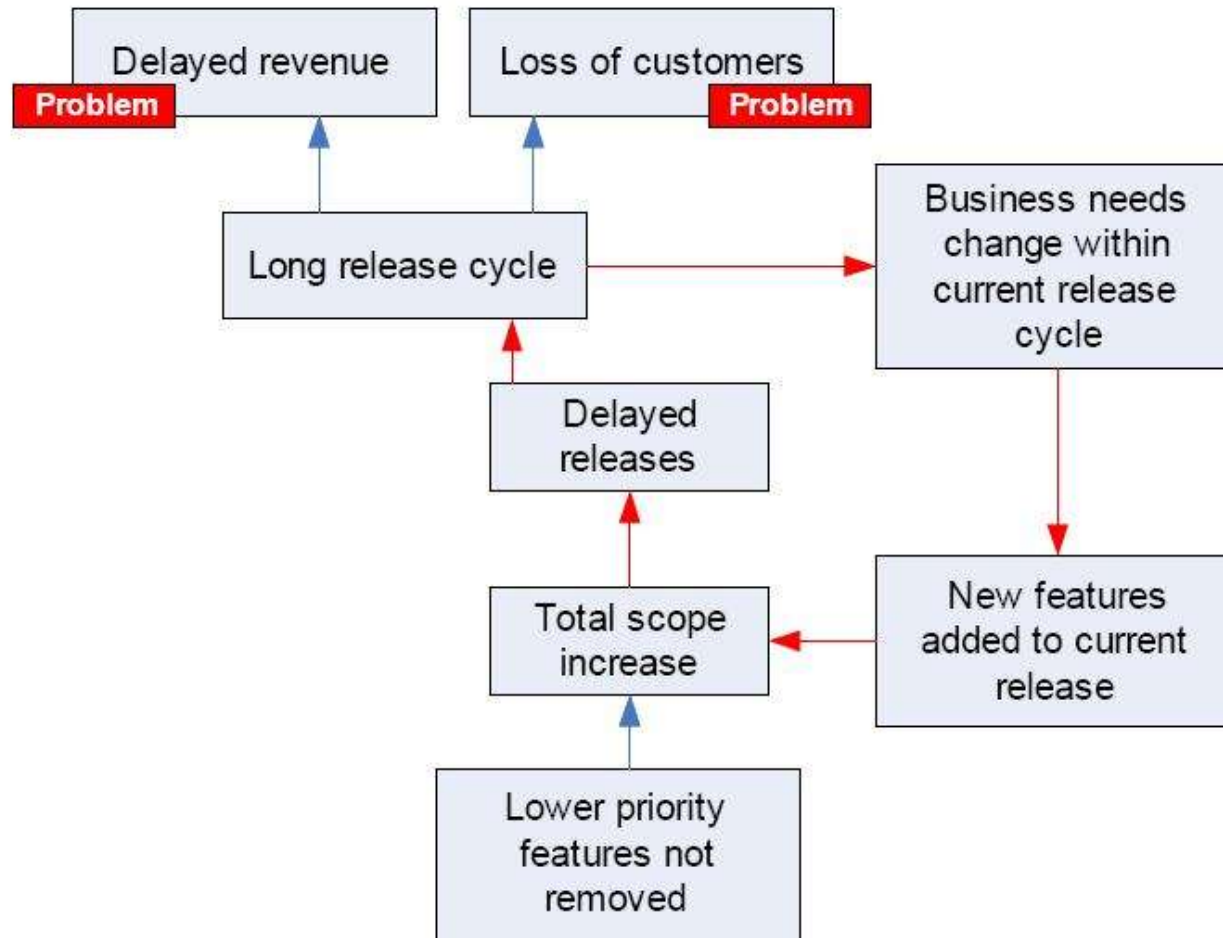
ROOT-CAUSE: LONG CYCLES

Delayed
releases

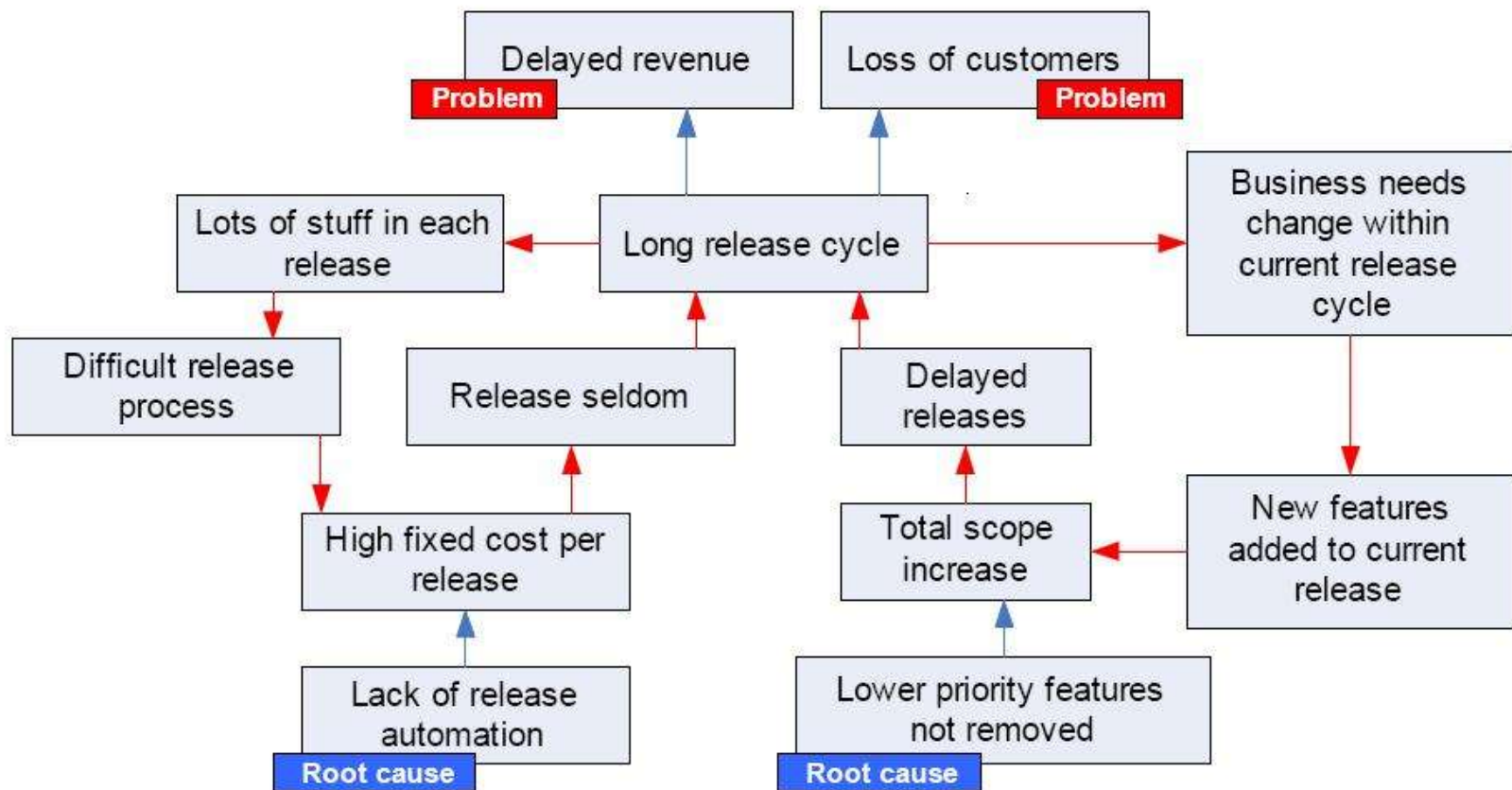
ROOT-CAUSE: LONG CYCLES



ROOT-CAUSE: LONG CYCLES



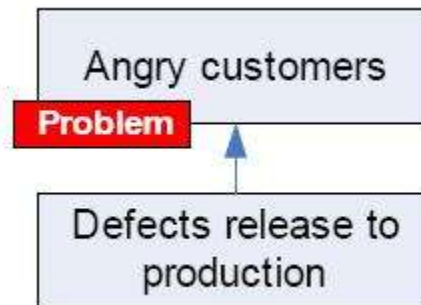
ROOT-CAUSE: LONG CYCLES



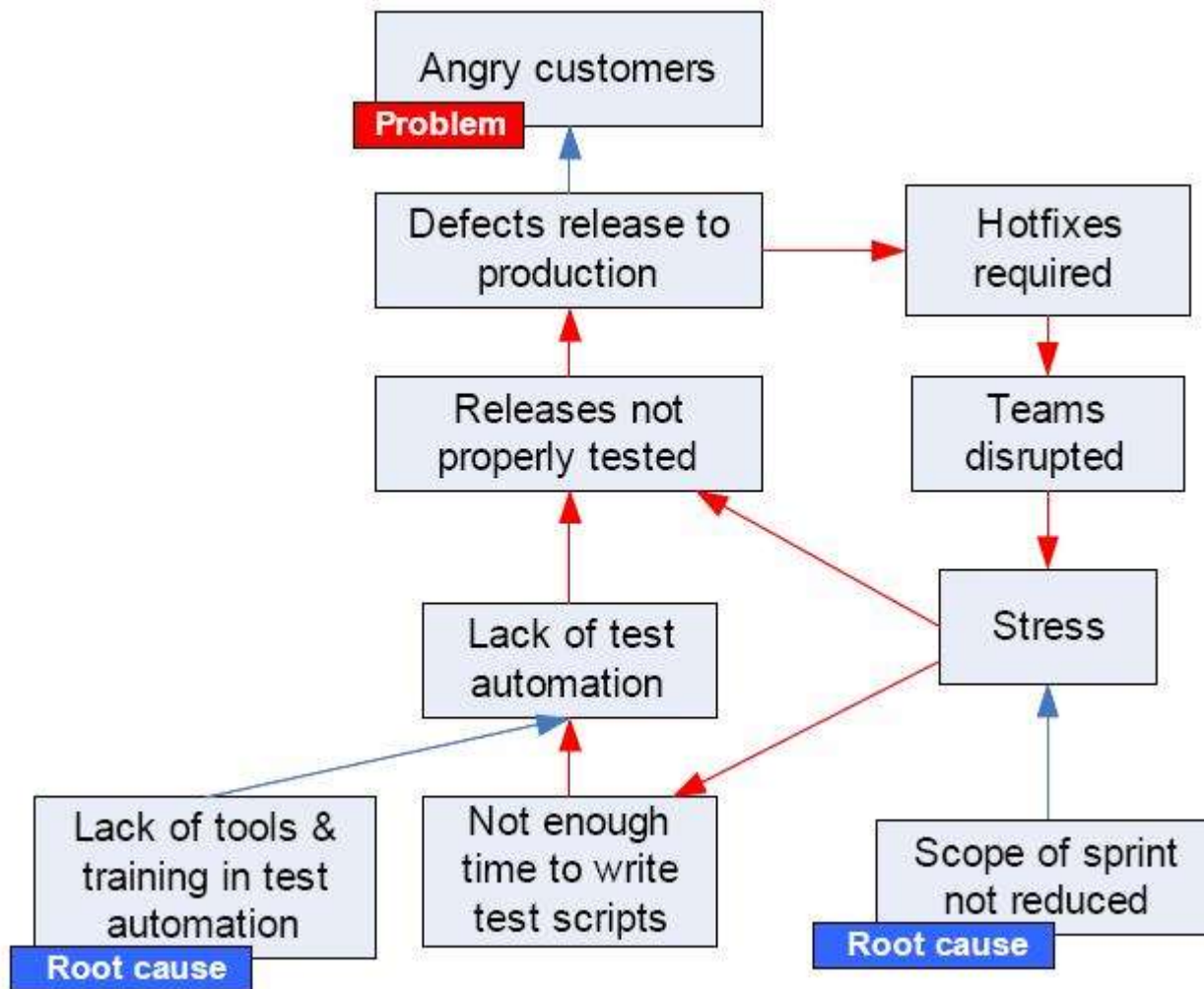
ROOT-CAUSE: DEFECTS

Defects release to
production

ROOT-CAUSE: DEFECTS

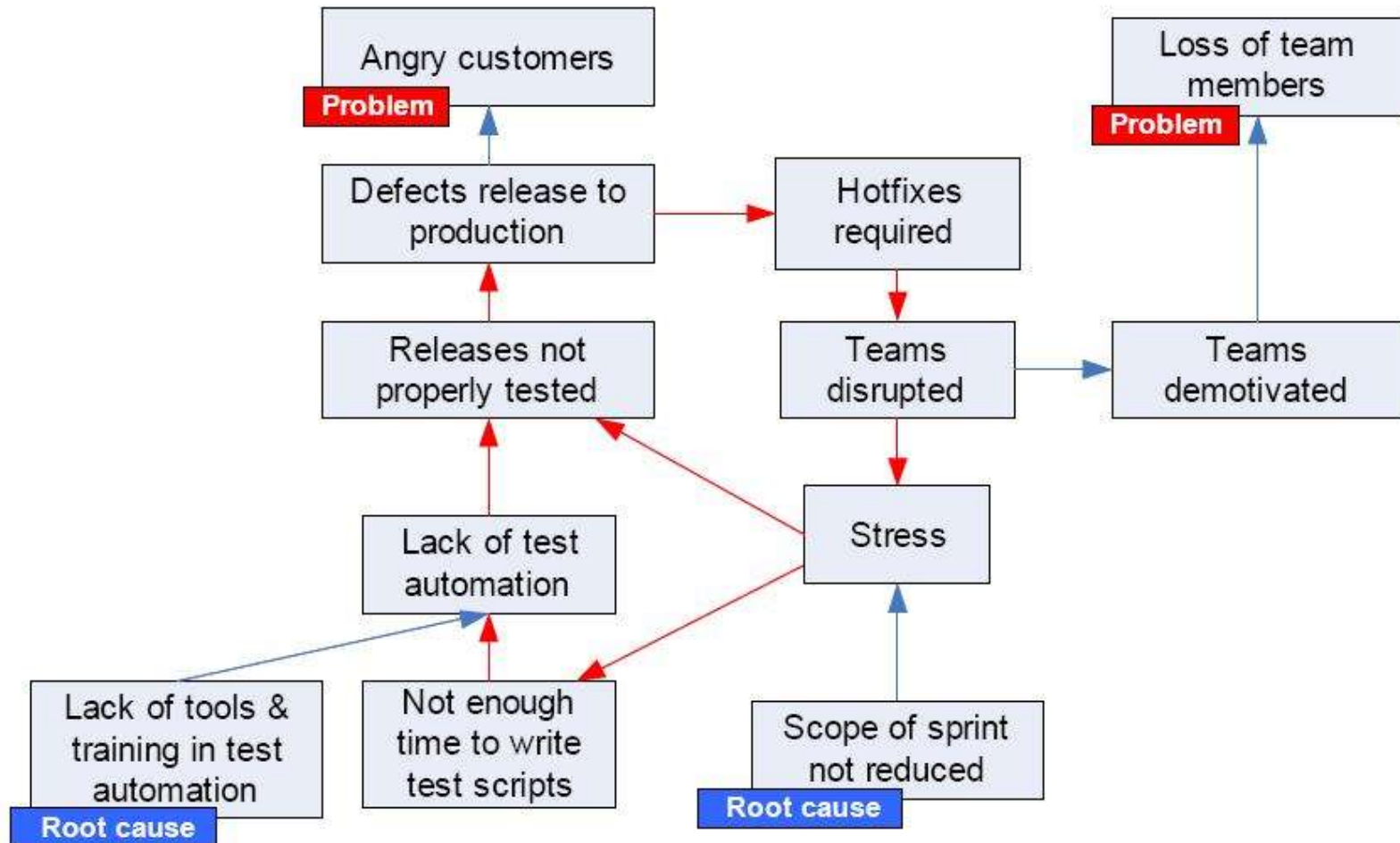


ROOT-CAUSE: DEFECTS



Success is going from failure to failure without loss of enthusiasm

ROOT-CAUSE: DEFECTS



COUNTERMEASURES

Countermeasures (Experiments)

Do

- Proposed countermeasure(s) to address each candidate root cause. [This should be a series of quick experiments to validate causal model analysis.]
- Predicted results for each countermeasure.

Assessment Questions

- Are there clear countermeasures steps identified?
- Do the countermeasures link to the root cause of the problem?
- Are the countermeasures focused on the right areas?
- Who is responsible for doing what, by when (is 5Why-1How clear)
- Will these action items prevent recurrence of the problem?
- Is the implementation order clear and reasonable?
- How will the effects of the countermeasures be verified?

K3 Problem Solving Template, Examples, and Assessment Questions - version 1.1 - By Tom Poppendieck and Ronak Kulkarni

Background	Plan
<ul style="list-style-type: none"> Why should the reader care about this situation and be motivated to participate in improving? 	
Assessment Questions	
<ol style="list-style-type: none"> Is there a clear theme for the problem report that reflects the context? Is the topic relevant to the organization's objectives? Is there one or other reason for writing on this topic (e.g., learning purposes)? 	
Current Condition	Plan
<ul style="list-style-type: none"> How do things work today? What is the problem? Baseline Metric? 	
Assessment Questions	
<ol style="list-style-type: none"> Is the current condition clear and logically depicted in a visual manner? How could the current condition be made clearer for the audience? Is the current condition depicting a problem or situation to be resolved? What is the current problem - the current condition? Are the facts of this situation clear, or are there just observations and opinions? Is the problem quantified in some manner or in a key qualitative? 	
Goal / Target Condition	Plan
<ul style="list-style-type: none"> What outcomes are expected for what reasons? What changes in metrics can be possibly expected? 	
Assessment Questions	
<ol style="list-style-type: none"> Is there a clear goal or target? What, specifically, is to be accomplished? How will this goal be measured or evaluated? What will improve, by how much, and when? 	
Root Cause Analysis	Plan
<ul style="list-style-type: none"> What is the root cause(s) of the problem? Use a simple problem analysis tool (i.e., 5 whys, fishbone diagram, association network) to show cause-and-effect relationships. 	
Assessment Questions	
<ol style="list-style-type: none"> Is the analysis comprehensive or broad based? Is the analysis detailed enough and did it probe deeply enough on the right level? Is the evidence of proper flow-why thinking about the true cause? Has cause and effect been documented or linked in some manner? Are all the relevant factors considered (human, machine, material, method, environment, measurement, and so on)? Do all those who will need to collaborate in implementing the countermeasures sign on the cause, offer model reasoning? 	

Objective	Clarify the problem solving
Metric	Process quality and executing process
Date	Current version Date
Countermeasures (Experiments)	Do
<ul style="list-style-type: none"> Proposed countermeasures to address each candidate root cause. [This should be a series of quick experiments to validate causal model analysis.] Predicted results for each countermeasure. 	
Assessment Questions	
<ol style="list-style-type: none"> Are there clear countermeasures steps identified? Do the countermeasures link to the root cause of the problem? Are the countermeasures focused on the right areas? Who is responsible for doing what, by when (is 5Why-1How clear) Will these action items prevent recurrence of the problem? Is the implementation order clear and reasonable? How will the effects of the countermeasures be verified? 	
Countermeasures (Results)	Check
<ul style="list-style-type: none"> Actual result of each countermeasure experiment. How does the current result compare with the countermeasures that are being prepared for implementation in phase? 	
Assessment Questions	
<ol style="list-style-type: none"> How will you measure the effectiveness of the countermeasures? Does the result stem from the previous goal statement? Has causal performance moved back with the goal statement? If performance has not improved, then why? What was missed? 	
Follow-up (Actions)	Act
<ul style="list-style-type: none"> What has we learned that does or does not improve the situation? In the light of the learning, what should be done? What should be done next or what should be adjusted to reflect what we learned? What do we need to learn next? 	
Assessment Questions	
<ol style="list-style-type: none"> What is necessary to prevent recurrence of the problem? What remains to be accomplished? What other areas of the organization need to be informed of this result? How will this be standardized and communicated? 	

Success is going from failure to failure without loss of enthusiasm

COUNTERMEASURES

- Countermeasures start out as quick experiments to validate your thinking behind the model you developed in your root-cause analysis.
- A series of experiments can confirm, refute, or suggest refinements to your model.
- To motivate people trying countermeasures you should formulate current state and goals well.

CONFIRMATION

Confirmation (Results)

Check

- Actual result of each countermeasure (experiment).
- How does the system actually behave with the countermeasures that are being proposed for implementation in place?

Assessment Questions

1. How will you measure the effectiveness of the countermeasures?
2. Does the check item align with the previous goal statement?
3. Has actual performance moved line with the goal statement?
4. If performance has not improved, then why? What was missed?

A3 Problem Solving Template, Example, and Assessment Questions - version 1.1 - By Tom Fajen and Hiroki Kahara.

Background	Plan
<ul style="list-style-type: none"> • Why is this important? • Why should the reader care about this situation and be motivated to participate in improving? 	
Assessment Questions	
<ol style="list-style-type: none"> 1. Is there a clear theme for the problem report that reflects its content? 2. Is the topic relevant to the organization's objectives? 3. Is there any other reason for working on this topic (e.g., learning purposes)? 	
Current Condition	Plan
<ul style="list-style-type: none"> • How do things work today? • What is the problem? • Baseline Metrics? 	
Assessment Questions	
<ol style="list-style-type: none"> 1. Is the current condition clear and logically depicted in a visual manner? 2. How could the current condition be made clearer for the audience? 3. Is the current condition depiction framing a problem or situation to be resolved? 4. What is the actual problem in the current condition? 5. Are the facts of the situation clear, or are there just observations and opinions? 6. Is the problem quantified in some manner or is it too qualitative? 	
Goal / Target Condition	Plan
<ul style="list-style-type: none"> • What outcomes are expected for what reason? • What changes in metrics can be plausibly expected? 	
Assessment Questions	
<ol style="list-style-type: none"> 1. Is there a clear goal or target? 2. Where, specifically, is to be accomplished? 3. How will this goal be measured or evaluated? 4. What will improve, by how much, and when? 	
Root Cause Analysis	Plan
<ul style="list-style-type: none"> • What is the root cause(s) of the problem? • Use a simple problem analysis tool (e.g., 5 whys, fishbone diagram, cause-effect network) to show cause-and-effect relationships. 	
Assessment Questions	
<ol style="list-style-type: none"> 1. Is the analysis comprehensive or a broad level? 2. Are the analysts detailed enough and did it probe deeply enough on the right level? 3. Is there evidence of proper five-whys thinking about the root cause? 4. Has cause and effect been demonstrated or linked in some manner? 5. Are all the relevant factors considered (human, machine, material, method, environment, measurement, and so on)? 6. Do all those who will need to collaborate in implementing the countermeasures agree on the cause-effect model reasoning? 	
Owner:	Author leading the problem solving
Mentor:	Person leading and assessing process
Date:	Current version Date
Countermeasures (Experiments)	Do
<ul style="list-style-type: none"> • Proposed countermeasure(s) to address each candidate root cause. • This should be a series of quick experiments to validate cause-and-effect analysis. • Predicted results for each countermeasure. 	
Assessment Questions	
<ol style="list-style-type: none"> 1. Are there clear countermeasure steps identified? 2. Do the countermeasures fix to the root cause of the problem? 3. Are the countermeasures focused on the right cause? 4. Who is responsible for doing what, by when (if 2 Whys)? How clear? 5. Will these action items prevent recurrence of the problem? 6. Is the implementation order clear and reasonable? 7. How will the effects of the countermeasures be verified? 	
Confirmation (Results)	Check
<ul style="list-style-type: none"> • Actual result of each countermeasure (experiment). • How does the system actually behave with the countermeasures that are being proposed for implementation in place? 	
Assessment Questions	
<ol style="list-style-type: none"> 1. How will you measure the effectiveness of the countermeasure? 2. Does the check item align with the previous goal statement? 3. Has actual performance moved line with the goal statement? 4. If performance has not improved, then why? What was missed? 	
Follow-up (Actions)	Act
<ul style="list-style-type: none"> • What have we learned that does or does not improve the situation? • In the light of the learning, what should be done? • How should the way we work or our standards be adjusted to reflect what we learned? • What do we need to learn next? 	
Assessment Questions	
<ol style="list-style-type: none"> 1. What is necessary to prevent recurrence of the problem? 2. What remains to be accomplished? 3. What other parts of the organization need to be informed of this result? 4. How will this be standardized and communicated? 	

Success is going from failure to failure without loss of enthusiasm

FOLLOW-UP

Follow-up (Actions)

Act

- What have we learned that does or does not improve the situation?
- In the light of the learning, what should be done?
- How should the way we work or our standards be adjusted to reflect what we learned?
- What do we need to learn next?

Assessment Questions

1. What is necessary to prevent recurrence of the problem?
2. What remains to be accomplished?
3. What other parts of the organization need to be informed of this result?
4. How will this be standardized and communicated?

A3 Problem Solving Template, Example, and Assessment Questions - version 1.1 - By Tom Poppendieck and Hiroki Kikuchi.

Background Plan	Owner: Author leading the problem solving	
<ul style="list-style-type: none">• Why is this important?• Why should the reader care about this situation and be motivated to participate in improving? Assessment Questions <ol style="list-style-type: none">1. Is there a clear theme for the problem report that reflects its content?2. Is the topic relevant to the organization's objectives?3. Is there any other reason for working on this topic (e.g., learning purposes)?	Member: Process leaders and assessing process	
Current Condition Plan	Date: Current version Date	
<ul style="list-style-type: none">• How do things work today?• What is the problem?• Baseline Metric? Assessment Questions <ol style="list-style-type: none">1. Is the current condition clear and logically depicted in a visual manner?2. How could the current condition be made clearer for the audience?3. Is the current condition depiction framing a problem or situation to be resolved?4. What is the actual problem in the current condition?5. Are the facts of this situation clear, or are there just observations and opinions?6. Is the problem quantified to some measure or is it too qualitative?	Countermeasures (Requirements) Do	
Goal / Target Condition Plan		<ul style="list-style-type: none">• Proposed countermeasures to address each candidate root cause. (This should be a series of simple experiments to validate causal model analysis.)• Predicted results for each countermeasure. Assessment Questions <ol style="list-style-type: none">1. Are there clear countermeasures that identified?2. Do the countermeasures link to the root cause of the problem?3. Are the countermeasures focused on the right cause?4. Who is responsible for doing what, by when (to 20/20/20 How clear)?5. Will these action items prevent recurrence of the problem?6. Is the implementation order clear and reasonable?7. How will the effects of the countermeasures be verified?
Root Cause Analysis Plan		Confirmation (Results) Check
<ul style="list-style-type: none">• What evidence can be used for what reasons?• What changes in metrics can be plausibly expected? Assessment Questions <ol style="list-style-type: none">1. Is there a clear goal or target?2. What, specifically, is to be accomplished?3. How will the goal be measured or evaluated?4. What will improve, by how much, and when?		<ul style="list-style-type: none">• Actual result of each countermeasure (experiment).• How does the current actual behavior with the countermeasures that are being prepared for implementation in place? Assessment Questions <ol style="list-style-type: none">1. How will you measure the effectiveness of the countermeasure?2. Does the actual item align with the previous goal statement?3. Has actual performance moved (up) with the goal statement?4. If performance has not improved, then why? What was missed?
		Follow-up (Actions) Act
		<ul style="list-style-type: none">• What have we learned that does or does not improve the situation?• In the light of the learning, what should be done?• How should the way we work or our standards be adjusted to reflect what we learned?• What do we need to learn next? Assessment Questions <ol style="list-style-type: none">1. What is necessary to prevent recurrence of the problem?2. What remains to be accomplished?3. What other parts of the organization need to be informed of this result?4. How will this be standardized and communicated?

Success is going from failure to failure without loss of enthusiasm

CONFIRMATION AND FOLLOWUP

- Countermeasures are candidate changes to the way you work, the standards you use, the approach you use that will avoid the problem you are trying to eliminate. If they work, you know what to do.

SCIENTIFIC APPROACH

- Reliable problem solving is based on reliable mental models (theory) supported by data, not by opinion or gut feel or prejudice.

WHY A₃?

- Concise presentation of each area of the template supports rapid, efficient communication by forcing the owner to identify what is really the important core and communicate it efficiently.
- A reader should be able to assess relevance of A₃ within 10 seconds. It requires title and background to be well written.
- A reader who recognizes they have the same problem must be able to understand the entire A₃ within 10 minutes of study.

PSYCHOLOGY

- Solving even small problems takes time and energy.
- People will make the time and find the energy if they consider it important.
- They will consider it important if the leaders pay attention to small problems and celebrate progress.
- People do not resist change, they resist being changed by others. Your task is to engage them to want to improve.

WHY vs WHO

- If the discovery of a problem sets off a search for who is at fault rather than why the organizations processes permitted the problem to occur, there will be workarounds and cover-ups.

SUSTAIN

- Big visible chart of problems solved or being solved. Column titles
 - Problem, Containment, Countermeasure
 - Owner, Status, Date
- Periodic status reviews are necessary
- Checklists

KM-LEAN-AGILE-SCRUM



Success is going from failure to failure without loss of enthusiasm

WHY & WHAT → HOW

- Why is easiest one
- What is harder
- How is terrific

ATTITUDE TO CHANGE

- “To different minds, the same world is a hell, and a heaven” - Ralph Waldo Emerson

POLITICS

- Managers are much more dishonest than employees
- Managers in big companies are more dishonest than managers in small companies
- There is a huge amount of politics at top levels

HIDDEN POWER

- Find key competencies
- Find replaceable and irreplaceable key people
- Find key decision influencers
- Figure out what are the hidden motivations or agendas of these people

ONE2ONE

- Agenda
 - Hidden goal and motivation
 - Hidden relations
 - Hidden emotions
 - Attitude to changes
 - Biggest problems and possible solutions
 - What can I do right now to help
- Doing it well requires lot of training
- “The most important thing in communication is hearing what isn't said.” - Peter Drucker

ONE2ONE: DIG DEEPER

- “No problem can be solved from the same level of consciousness that created it” – Albert Einstein

ONE2ONE: LOGICAL LEVELS

- Environment
- Behavior
- Capabilities
- Beliefs and values
- Identity
- Purpose

WILL-POWER

- Well predefined process of first reaction
- Stay calm in case of unexpected events or unfair critic
- Mind like water
- Ability to stay on track
- No sign of fear
- Ability to make hard decisions under pressure and time limitations

PERFECT PROCESS KNOWLEDGE

- There will be many attempts to critic Agile or Lean approach
- The same question will be discussed thousand times
- You should deeply understand the subject and you should be able to explain it in popular way with very strong arguments

KILL, DON'T SHOOT

- “If you shoot at a king you must kill him” -
Ralph Waldo Emerson

OVERTIME

- Work ten hours a day
- Spend nights and weekends generating improvement ideas
- Ability to maintain energy and productivity while working long hours
- Ability to maintain creativity and quality while working long hours
- Ability to work without delay several days and nights

FULCRUM

- There should be something we know for sure to build our system on it

HIRING

- One of the biggest problems is usually irreplaceable or incompetent people
- You should anticipate the problem and start recruiting corresponding specialists early
- While looking for candidates, reliable consultants can help to solve the problems

SELF-CRITICISM & OPTIMISM

- "The combination of self-criticism and boundless optimism is the hardest and the most important factor of success" Alan Kay

SYNC WORDS & ACTIONS

- “What you do speaks so loudly that I cannot hear what you say” - Ralph Waldo Emerson
- Sometimes you see an easy way to accomplish your task by violating just one small principle
- Resisting the temptation is very hard, harder than people usually think

UNCONQUERABLE ENTHUSIASM

- Despite problems
- Despite failures
- Despite fatigue
- Despite ingratitude
- Despite unfairness

LOVE WHAT YOU DO

- "The only way to do great work is to love what you do. If you haven't found it yet, keep looking. Don't settle. As with all matters of the heart, you'll know when you find it." – Steve Jobs
- "Success is not the key to happiness. Happiness is the key to success. If you love what you are doing, you will be successful." - Albert Schweitzer, Nobel Prize recipient

THANKS

from failure to failure

If you have any questions
don't hesitate to send me
an email
approximation@gmail.com

Success is going

without loss of

enthusiasm