

# The Eight Disciplines of Problem Solving (8D)

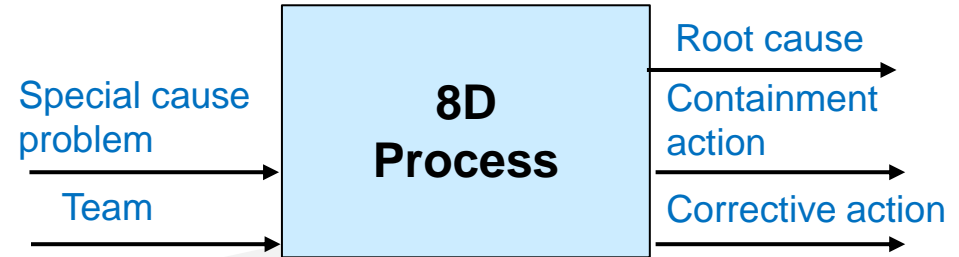
## Problem

How to solve a special cause problem?

## Difficulty

Work with an SME

- The **8 Disciplines**, also known as the **8D process**, is a team-oriented approach to correct recurring problems.
- 8D has more complexity than the PDCA (plan-do-check-act) approach and less complexity than six sigma's DMAIC.



PDCA	8D
Plan	Step D0
	Step D1
	Step D2
Do	Step D3
	Step D4
	Step D5
Check	Step D6
Act	Step D7
	Step D8

1. Select the problem to be addressed
2. Execute the classic 8D steps (with D0 added):
  - D0: Prepare and plan for 8D.
  - D1: Select a knowledgeable team.
  - D2: Quantify the problem: who, what, where, when, why, how, and how many.
  - D3: Develop and implement a containment plan to isolate the customer from the problem.
  - D4: Determine the problem root cause(s).
  - D5: Identify the corrective actions and test.
  - D6: Implement the corrective actions.
  - D7: Take preventive measures to prevent recurrence of this and similar problems.
  - D8: Congratulate the team.

# 8D – Example – Illustrative “8D Report”

## Example: 8D Customer Complaint Resolution Report

Customer Complaint Resolution Report					
Report Title: Healthy Community Coalition (HCC) Meeting Improvement					Report # 1
Dates: 3/15/17-8/15/17	Customer Complaint:	3/15/17	Report Initiated:	3/22/17	Report Completed: 8/15/17
Customer:	Jane Doe, HCC Member		Program/Division:	Health Promotion	
<b>1D – Team Members</b>					
Role	Name	Email Contact			
Leader	Jane Eyre	jeyre@examplehd.com			
SME	Atticus Finch	afinch@examplehd.com			
Champion/Sponsor	Kinsey Millhone	kmillhone@examplehd.com			
<b>2D – Problem Description</b>					
HCC is responsible for convening partners to make progress on the CHIP and for increasing community engagement and mobilization. Kinsey received an email from a key partner (a hospital community benefit director) about the last three HCC meetings. The complaint was a long, detailed list of frustrations about the ineffectiveness of the meetings, which included lack of meeting minutes and timely agendas. Further, the programming for meetings seemed last minute – and mostly committee updates instead of meaningful presentations, shared learning and connecting. The complaint also included frustration that this coalition feels more like a coffee klatch (social chitchat), rather than an effective way to make progress on serious community health concerns.					
<b>3D – Interim Containment Actions (who, takes what action, by when)</b>					
<ol style="list-style-type: none"> <li>Kinsey immediately replied to the partner stating that she appreciated the feedback and will begin looking into what can be done.</li> <li>Kinsey initiated the 8D process to explore the process improvement options.</li> <li>Kinsey will provide a more detailed update on the problem-solving process update to the partner prior to the next HCC meeting.</li> <li>Jane will cancel the April HCC meeting to assure adequate time to initiate an improvement process.</li> </ol>					
<b>4D – Root Cause Analysis</b>					
<b>Cause &amp; Effect Diagram</b>			<b>Five Why Analysis</b>		
			<ol style="list-style-type: none"> <li>Key partner is reporting ineffective meetings</li> <li>Poor planning &amp; execution</li> <li>New, poorly trained staff</li> <li>Gaps in training &amp; oversight</li> <li>No process</li> </ol>		

5D – Design Corrective Action (generate solutions to address root causes)			
What needs to be done?	Who must be involved?	By when?	How will success be measured?
1. Effective meeting training for staff	Kinsey, Jane	April 15	Pre-Post Assessment
2. Develop a coalition program design team	Jane and 2-4 community partners, including complainant	May 1	Agenda, participation, minutes, attendance at meetings
3. Coalition assessment	Atticus	June 15	Assessment report shared with coalition, July meeting
4. Coaching/mentoring for Jane	Jane, coalition/QI consultant	Every 2 weeks for 2 months	Kinsey consultation with key partners in late July
6D – Implement and Validate Corrective Action			
Solutions Implemented:	Results:		
Contracted for effective meeting training & facilitation skills	All staff leading and participating in community coalitions now have shared expectations about agendas, design teams, minutes, planning/execution/follow-up.		
Identified an internal coalition coach for Jane	Jane has increased support, understands the expectations of external clients, and now exceeds expectations.		
Coalition Assessment developed, administered & Analyzed	Discovered new opportunities to improve and learned that most partners are very happy with their level of engagement.		
Jane, with help from Kinsey, created an HCC Design Team.	More partners are sharing the work and feeling ownership in the effectiveness of the meetings. Jane is building deeper relationships with community partners. Attendance has increased. Agendas and minutes are available for all meetings on the coalition website.		
Customer Notification	Assigned to:	Key Messages	Completion Date:
Customer was included in coalition program design team	Jane	Customer participation is key to process improvement	8/1/17
7D – Preventive Action (policy/procedure change, training protocol, etc.)			
Action Taken	Responsible Person	Completion Date:	
Added a training plan to the agency workforce development plan for both 1) effective meetings and 2) meeting facilitation (with criteria for selecting staff who must complete at least every two years).	Kinsey	8/15/2017	
Adopted a policy, procedure, and schedule for coalition assessment (for customer satisfaction data collection) method for all agency supported coalitions.	Atticus	8/15/2017	
8D – Team and Individual Recognition			
Jane, Kinsey, and Atticus completed a QI storyboard documenting the intervention, which will be posted in the agency for the month September. A feature story was shared in the department newsletter focusing on the lessons learned from improved community relationships.			

From [http://www.phf.org/resourcestools/Documents/8D\\_Customer\\_Complaint\\_Resolution\\_Report.pdf](http://www.phf.org/resourcestools/Documents/8D_Customer_Complaint_Resolution_Report.pdf) (with permission)

# 8D – Notes

## Slide 1

1. 8D focuses on variation due to special causes, that is, solving a specific problem. Six Sigma focuses on common cause variation, and improving capability.
2. Goals of the 8D process include:
  - A. Quickly responding to a customer complaint (e.g. a failed component at the customer site).
  - B. Addressing steps D0 through D3, and reporting to the customer, within three days.
3. Benefits of 8D include
  - A. It is simple and effective.
  - B. It includes root cause analysis, which should prevent the specific problem from arising again.
  - C. It uses a cross-functional team.
4. Use of 8Ds is standard in the automotive industry.

## Slide 2

1. An 8D report documents the results of each step in the 8D process.
2. The example shown was taken from a web site.

### Recommended web sites for more information

- <https://www.rolls-royce.com/~media/Files/R/Rolls-Royce/documents/sustainability/value-chain-competitiveness/9-vcc-how-to-carry-out-problem-solving.pdf>
- [http://www.phf.org/resourcestools/Documents/8D\\_Customer\\_Complaint\\_Resolution\\_Report.pdf](http://www.phf.org/resourcestools/Documents/8D_Customer_Complaint_Resolution_Report.pdf)