Case Study and Best Practices for Promoting Safety Culture in Workplace

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Safety Culture & Safety Climate

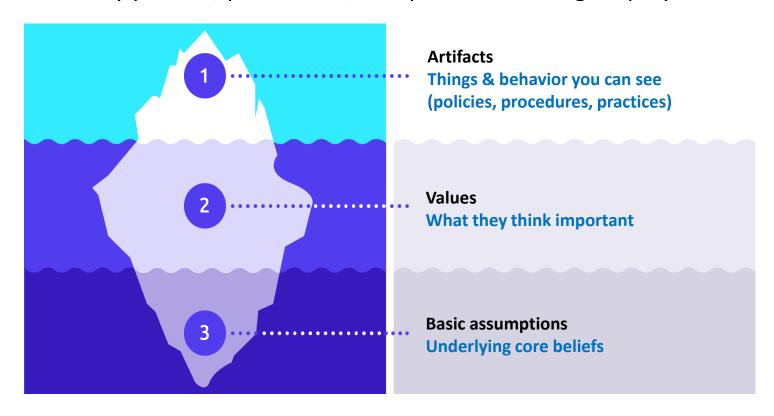
Safety culture

- Basic assumptions, values, beliefs that employees share in relation to safety

Safety climate

- Shared perceptions of the safety policies, procedures, and practices among employees within an

organization



Setting

- 6 Korean chemical companies and their on-site subcontractors

Objectives

- To find strengths and weaknesses of safety climate
- To develop safety improvement plans

If you can't measure it, you can't improve it.

To develop new one or to use existing one?

Information gathering

- Literature review
- SME Interviews

Survey development

 Generate items for preliminary survey questions

1st Pilot testing

- Administer survey
- Analyze the data a
- Refine survey based on the data

2nd pilot testing

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Final survey

- Safety climate measure
- Safety competence
- Safety motivation
- Safety behavior







- Zohar & Luria (2005): Organizational Level Safety Climate
- Top management in this plant/company ...
 - 1. Reacts quickly to solve the problem when told about safety hazards.
 - 2. Insists on thorough and regular safety audits and inspections.
 - 3. Tries to continually improve safety levels in each department.
 - 4. Provides all the equipment needed to do the job safely.
 - 5. Is strict about working safely when work falls behind schedule.
 - 6. Quickly corrects any safety hazard (even if it's costly).
 - 7. Provides detailed safety reports to workers (e.g., injuries, near accidents).
 - 8. Considers a person's safety behavior when moving—promoting people.

- 9. Requires each manager to help improve safety in his—her department.
- 10. Invests a lot of time and money in safety training for workers.
- 11. Uses any available information to improve existing safety rules.
- 12. Listens carefully to workers' ideas about improving safety.
- 13. Considers safety when setting production speed and schedules.
- 14. Provides workers with a lot of information on safety issues.
- 15. Regularly holds safety-awareness events (e.g., presentations, ceremonies).
- 16. Gives safety personnel the power they need to do their job.

- **Zohar & Luria (2005): Group Level Safety Climate**
- My direct supervisor ...
 - 1. Makes sure we receive all the equipment needed to do the 10. Makes sure we follow all the safety rules (not just the iob safely. most important ones).
 - 2. Frequently checks to see if we are all obeying the safety rules.
 - 3. Discusses how to improve safety with us.
 - 4. Uses explanations (not just compliance) to get us to act safely.
 - 5. Emphasizes safety procedures when we are working under pressure.
 - 6. Frequently tells us about the hazards in our work.
 - 7. Refuses to ignore safety rules when work falls behind schedule.

 - 9. Reminds workers who need reminders to work safely.

- 11. Insists that we obey safety rules when fixing equipment or machines.
- 12. Says a "good word" to workers who pay special attention to safety.
- 13. Is strict about safety at the end of the shift, when we want to go home.
- 14. Spends time helping us learn to see problems before they arise.
- 15. Frequently talks about safety issues throughout the work week.
- 8. Is strict about working safely when we are tired or stressed. 16. Insists we wear our protective equipment even if it is uncomfortable.

Nordic Occupational Safety Climate Questionnaire (NOSACQ-50)

NOSACQ-50 translations









NOSACQ-50 is currently available in 40+ languages (click on a language to download a PDF version):

Amharic, Arabic, Bangla, Bulgarian, Chinese, Croatian, Czech, Danish, Dutch-Belgian, Dutch-Netherlands, English, Estonian, Finnish, French, French-Belgian, German, Greek, Hungarian, Icelandic, Indonesian, Italian, Japanese, Kiswahili, Latvian, Lithuanian, Malay, Norwegian, Persian, Polish, Portuguese, Romanian, Russian, Slovak, Slovene, Spanish-Chilean, Spanish-Chilean, Spanish-Spain, Swedish, Thai, Turkish and Vietnamese.

Nordic Occupational Safety Climate Questionnaire (NOSACQ-50)

Dimension	Example item
1. Management safety commitment and ability	Management ensures that everyone receives the necessary information on safety
2. Management safety empowerment	Management encourages employees here to participate in decisions which affect their safety
3. Management safety justice	Management looks for causes, not guilty persons, when an accident occurs
4. Employees' commitment to safety	We who work here try hard together to achieve a high level of safety
5. Workers' safety priority and risk non-acceptance	We who work here accept dangerous behaviour as long as there are no accidents (R)
6. Safety communication, learning, and trust in co-workers' safety competence	We who work here can talk freely and openly about safety
7. Trust in efficacy of safety systems	We who work here consider that safety training to be good for preventing accidents

Hahn & Murphy (2008): Global work safety climate measure

- 1. New employees learn quickly that they are expected to follow good health and safety practices.
- 2. Employees are told when they do not follow good safety practices.
- 3. Workers and management work together to ensure the safest possible conditions.
- 4. There are no major shortcuts taken when worker health and safety are at stake.
- 5. The health and safety of workers is a high priority with management where I work.
- 6. I feel free to report safety problems where I work.

What we wanted to our safety climate measure

Objectives

- To find strengths and weaknesses of safety climate
- To develop safety improvement plans
- → Multidimensional measure of safety climate

Subject Measure Expert Interviews

- Interview employees & safety managers in chemical industry
- → "Outsourcing of Risk": safety support for subcontracting companies
- → Short enough to motive employees to complete the survey
- → Safety motivation, competence, behavior as well as safety climate

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- SME **Interviews**

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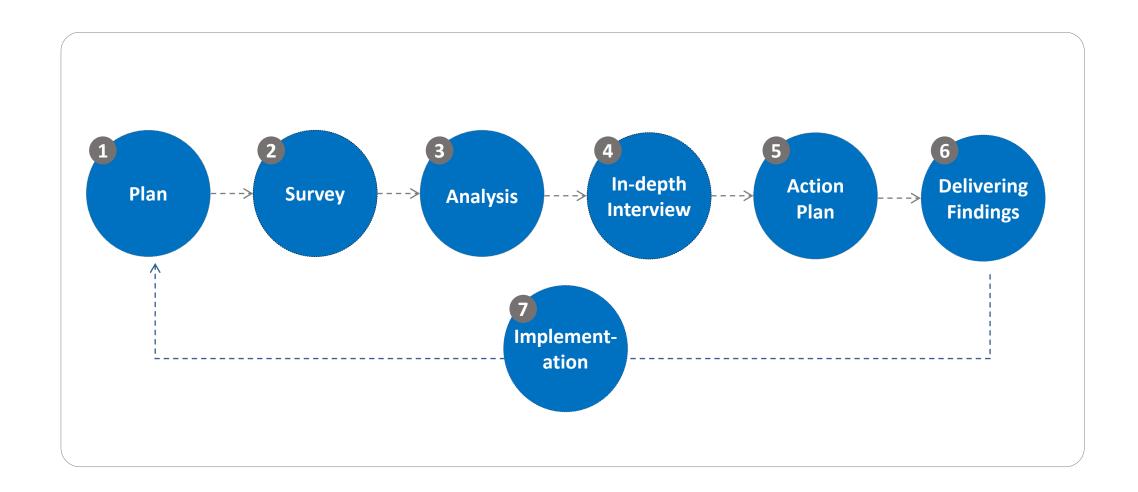
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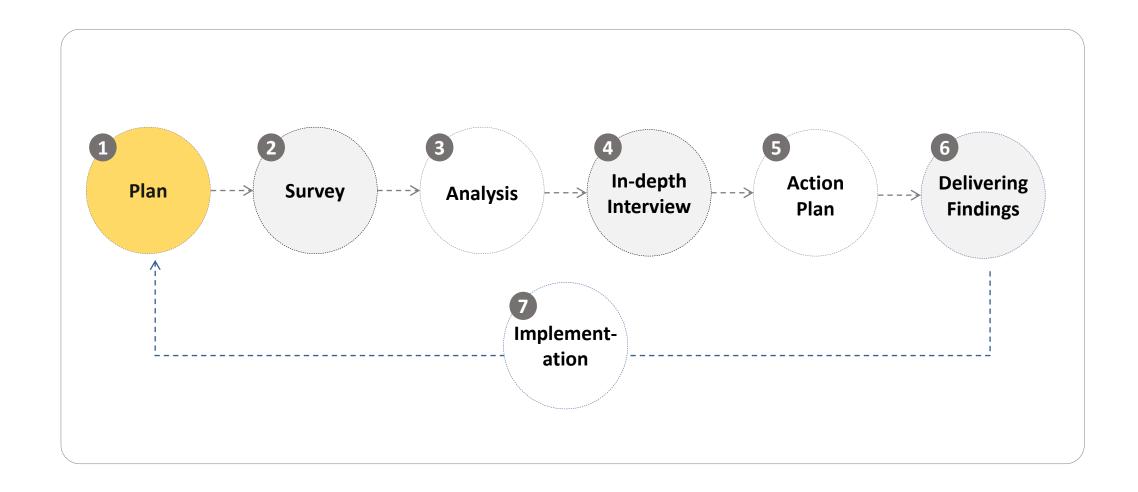




Safety climate measure for Korean chemical industry

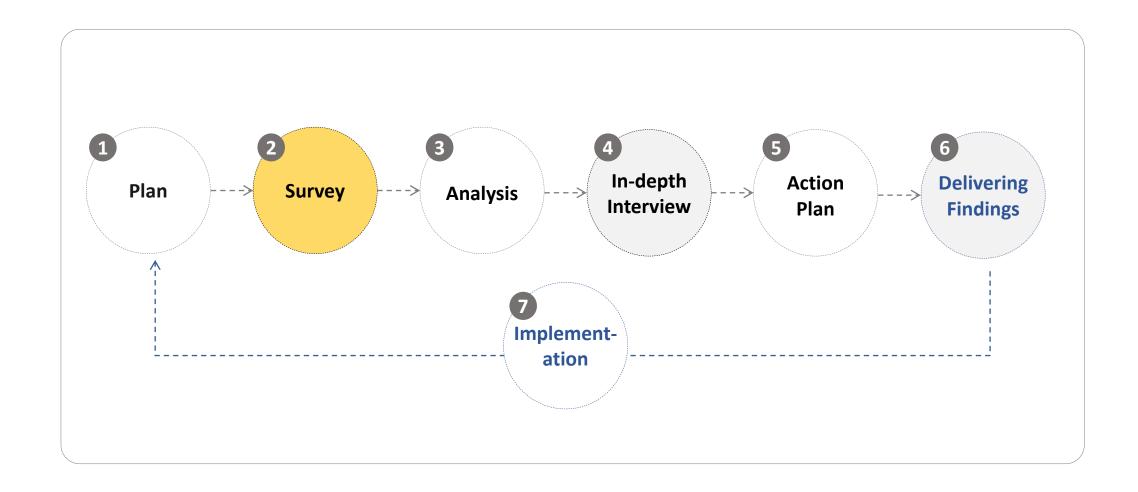
	Dimension/Subdimensions	N. of items	Sample item	
	1. Management commitment to safety	7/3	Management places a strong emphasis on workplace health and safety.	
	2. Safety rules & procedures	5/3	Some safety procedures/rules do not reflect how the job is done. (R)	
Safety Climate	3. Accident management	6/3	The organization actively learns from accident investigation to prevent accidents recurring.	
	4. Safety personnel	4/3	Safety personnel of the company have expertise that they need to do their job.	
(56/	5. Employees participation	4/3	The organization provides clear follow-ups for employees' safety suggestions.	
28 items)	6. Safety training	7/3	We consider that safety training provide useful information for preventing accidents.	
	7. Supervisor's safety leadership	8/3	My supervisor makes sure we follow all the safety rules all the time.	
	8. Safety practice	9/4	We frequently talks about safety issues.	
	9. Safety support for subcontractors	6/3	The organization genuinely cares about safety and health of subcontracting employees.	
Safety competence		8/3	I have the necessary competence to perform my job in a safe manner.	
Safety motivation		4/3	Safety has top priority when I do my job.	
Safety compliance behavior		2	I use the correct safety procedures for carrying out my job.	
Safety participation behavior		2	I proactively make suggestions to improve workplace safety.	





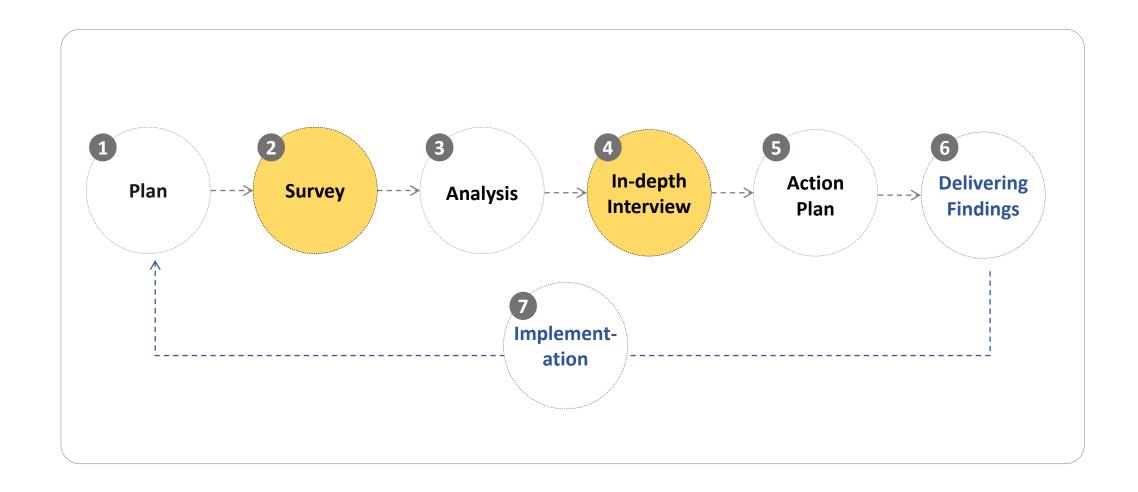
Planning stage

- Set clear strategic objectives regarding the purpose and uses
- Obtain commitment from senior management
- Who should be involved in the data collection effort
- What specific types of information are to be collected
- How to prepare the organization for the survey effort
- How to share the findings from the safety climate assessment
- Communicate, communicate, communicate



Survey vs. interview

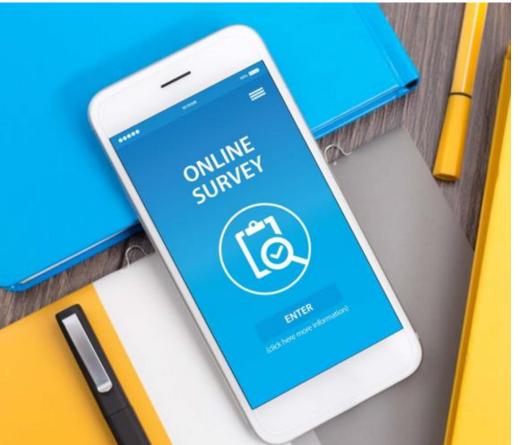
	Advantages	Disadvantages
Survey	 Standardization Relatively easy and inexpensive to administrate to a large sample Suitable for statistical analysis Easy to communicate the findings 	 Subject to misinterpretation depending on how questions are designed Scope of data can be limited
Interview	 Allows for gathering in-depth information Use probes for clarification People tend to open up more 	 Expensive and time consuming Requires strong interviewing skills Difficult to analyze and quantify results



Survey

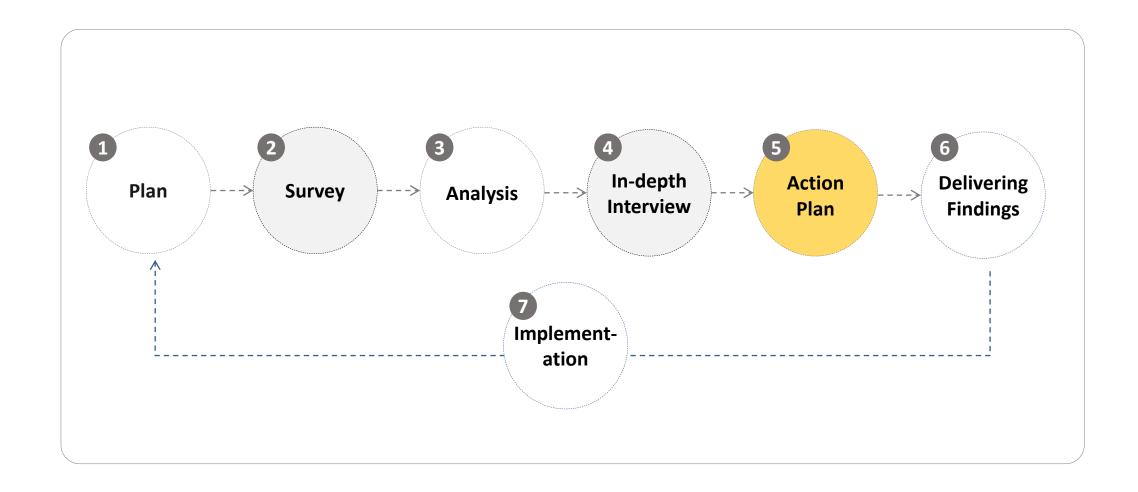
- More than 5,000 employees participated in survey

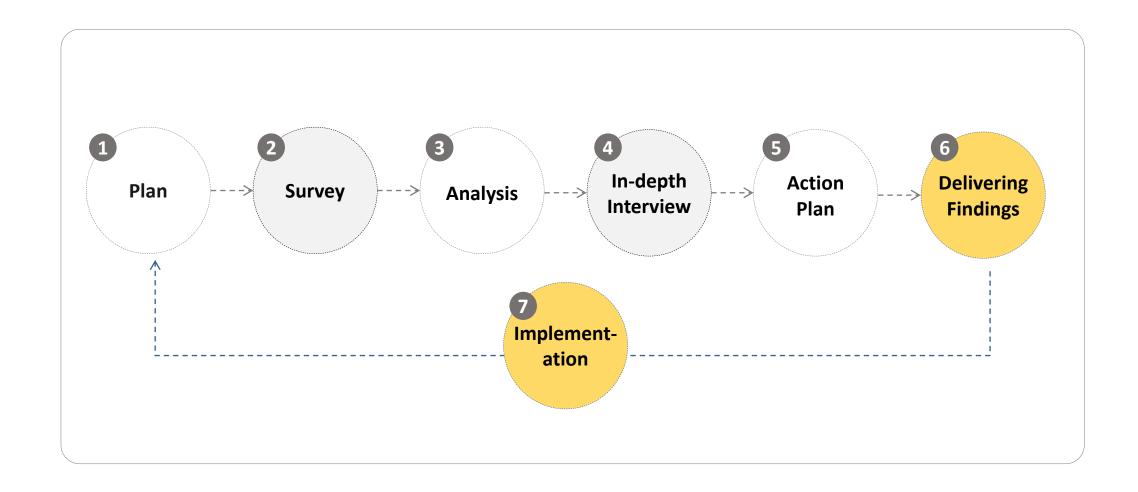




Interview

- More than 200 employees were interviewed
- Whether employees felt safe to answer the questionnaire
- Whether the survey result make sense to them & why or why not
- Ideas on how to promote safety culture in the workplace







Thank you very much

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