

1 Introduction

Singapore Institution of Safety Officers (SISO) conducted a survey of WSH Community in Singapore from 27 Sep through to 31 Oct 2022. The aim is to gather inputs to identify challenges and skillsets needed to be more effective to achieve WSH Vision Zero.

2 Work Schedule

- 1) May 2022 – formed workgroup; explored option to use FormSG with MOM-WSHI
- 2) Jun 2022 – reviewed selected literatures/legislations/guidelines
- 3) Jul 2022 – worked on survey questions; MOM-WSHI contributed ideas
- 4) Aug 2022 – finalised survey, not using FormSG. WSHC agreed to help publicise in WSH Bulletin
- 5) Sep/Oct 2022 – sent survey invitations to WSH community
- 6) Nov 2022 – workgroup to complete data analysis and identify ideas for follow-up; to share draft/preliminary outcome with WSH Council, MOM WSHI, and SISO ExCo
- 7) Dec 2022 – to conduct focus group discussion, two groups/rounds
- 8) Jan 2023 – to finalise on the data analysis and proposals; and work on a draft formal report
- 9) Feb 2023 – to share the draft formal report with WSH Council, MOM-WSHI, and SISO ExCo, with recommendations
- 10) Mar 2023 – to publish the final formal report, on SISO website and WSH Bulletin (via WSH Council)
- 11) Mar 2023 – to dissolve up the workgroup

3 SISO Workgroup

The following WSH personnel and practitioners were invited and appointed by SISO Executive Committee to be members of the Workgroup on WSH Community Professional Development:

- 1) Chow Choy Wah
- 2) May Ong
- 3) Eric Xiao
- 4) Melvin Loy
- 5) Isabella Yeo
- 6) Neo Ser Hock
- 7) Lau Hong Chee
- 8) Vivian Poh
- 9) Li Yuanzhe
- 10) Wong Liang Ping
- 11) Lim Sui Soon (Workgroup Leader)

4 Invitations to Take the Survey

The invitations to take part in the survey were announced via:

- a) Two issues of WSH Bulletin published by Singapore WSH Council, on 27 Sep 2022 and 12 Oct 2022. WSH Bulletin has about 75,000 subscribers.
- b) SISO Telegram channel, on 12 Oct 2022. This channel has about 500 subscribers.

Note: There is no data available how many of the 75,000 subscribers of the WSH Bulletin are WSH Managers, WSH Officers, WSH Coordinators and WSH Trainers.

5 Responses

A total 1,294 visits to the survey site were registered during the survey duration. Of these, there were 521 valid entries, i.e., those that have responded to all five pages/screens with a total of 17 questions.

6 Analysis

The survey results were analysed by the SISO Workgroup on WSH Community Development.

Analysis primarily based on all 521 valid entries. In some aspects to have better focus, the following combinations are used and stated, as examples:

- WSH Manager (x148) + SWSHO/WSHO (x185) + WSH Coordinator (x77) = 410 respondents
- WSH Trainers only (x7)

The following six topics were identified for follow-up actions based on the analysis:

- Topic #1 – Performing WSH Tasks
- Topic #2 – Performing WSH Training
- Topic #3 – Effect of Reporting Structure
- Topic #4 – Effect of Engagement with Management
- Topic #5 – Important Critical Core Skills
- Topic #6 – Important Technical Skills and Competencies

7 Focus Group Discussions

A total of 36 persons have signed-up to take part in the Focus Group Discussion (FGD). Two sessions of FGD via Zoom were held. FGD session agenda:

- 07:30-07:40 pm – Greeting and Introduction (Sui Soon)
- 07:40-08:10 pm – Presentation of analysis of the survey results (Sui Soon)
- 08:10-08:55 pm – Focus Group Discussion (Moderator)
- 08:55-09:00 pm – Closing (Sui Soon)

FGD #1 – Tue 6 Dec 2022, 7:30-9:00 pm, via Zoom

Invited Participants:

- 1) Benson Ong Joo See, EHS Manager
- 2) Lionel Chee, Safety Officer
- 3) Gavin See Chiau Khean, Manager, Safety & Quality Office
- 4) Thangadurai Mathankumar, WSHO

Moderator: May Ong

Note Taker: Li Yuanzhe

FGD #2 – Mon 12 Dec 2022, 7:30-9:00 pm, via Zoom

Invited Participants:

- 1) Roger Lim, HSE Professional
- 2) Susan Teo, EHS Manager
- 3) Poovanur Swaminathan Venkatesh, Group Deputy General Manager
- 4) Punniya Moorthy, Safety Officer
- 5) Mok Wai Kheong, SVP - HSE

Moderator: Vivian Poh

Note Taker: Chow Choy Wah

Key Outcome of the FGDs:

- 1) The FGD participants were presented with the six topics, the supporting data derived from the survey, and the 2-3 ideas for each as proposed by the workgroup. They were then invited in turn by the moderator to comment on the information, and share their view.
- 2) The FGD participants did not see any surprise for five of the six topics presented, except Topic #3 – Effect of Reporting Structure.
- 3) The FGD participants have expressed almost unanimous views on four (including Topic #3) of the six topics presented; one participant each had expressed differing view for Topic #5 – Important Critical Core Skills, and Topic #6 – Important Technical Skills and Competencies.
- 4) For Topic #1 – Performing WSH Tasks, comments on data and ideas:
 - No surprise.
 - Organisation structures differ from one to another, this has an influence on what are the WSH tasks performed by the WSH personnel. Most performed tactical tasks, smaller percentage do have roles in strategic-related.
 - FGD participants opined that WSH personnel should acquire suitable skillsets to understand the organisation management strategies, and seek alignment to gain support for required WSH outcomes.
- 5) For Topic #2 – Performing WSH Training, comments on data and ideas:
 - No surprise.
 - Most WSH personnel do play a role in conducting routine in-house WSH-related training, a smaller proportion have roles in training assessment and curriculum.
 - FGD participants opined that WSHOs should have knowledge and skills in designing and delivering in-house WSH training. It would be helpful for WSH personnel involve in WSH training to acquire some additional knowledge and skills in WSH training curriculum design, delivery, and assessment.
- 6) For Topic #3 – Effect of Reporting Structure, comments on data and ideas:
 - FGD participants found it **surprising** that survey data shows many junior WSH personnel feel very confident or moderately confident in issuing (internal) SWO for unsafe situations.
 - Confidence in issuing SWO could be an indication of the company safety policy and culture. Supportive management would encourage WSH personnel to have confidence to issue SWO.
 - FGD participants opined that WSHOs and WSH Coordinators may still discuss with the top management before issuing significant SWO. Nevertheless, WSH personnel should continue to engage various stakeholders in their organisations in timely and suitable use of SWO to stop and correct unsafe situations.
- 7) For Topic #4 – Effect of Engagement with Management, comments on data and ideas:
 - No surprise.
 - Regular WSHOs engagement with management is important and should be both ways. It also gives a positive impression to the rest of the staff that WSH is important, and WSHOs will be more confident in carrying out their duties, including issuing SWO.
 - FGD participants opined that WSH personnel to have more frequent engagement with top management to establish a good understanding for organisation decision-making process and eventually better in executing their WSH duties.
- 8) For Topic #5 – Important Critical Core Skills, comments on data and ideas:

- No surprise. However, one FGD participant felt that WSHOs should focus on core technical skills to avoid “diluting” their attention.
 - Soft skills maybe more critical nowadays. For example, WSHOs need to be able to communicate with senior management on WSH issues, or why certain jobs need to be stopped or slowed down to prevent accident from happening.
 - FGD participants opined that Continual Professional Development (CPD) framework should encourage WSHOs to take up more critical core skills training courses.
- 9) For Topic #6 – Important Technical Skills and Competencies, comments on data and ideas:
- No surprise. However, one FGD participant felt that basic technical knowledge “are more useful than data analytics, especially for new WSHOs.”
 - Many organisations are adopting digitalisation, ability to perform data analysis based on available statistic (e.g., using Power BI) will help to convince the management better as compared to just based on personal opinion. Beyond the commonly talked about drone technology, some other examples of technical skills in use include the use of: VR/AR simulator training, risk assessment software with quantitative data, and real-time monitors and sensors.
 - FGD participants opined that SISO and other agencies (e.g., e2i) may jointly conduct and publish regular training needs analysis, for both critical core skills and technical skills and competence, for WSH personnel and the larger WSH community in professional development.
- 10) Please refer to the record sheets in Appendix for the six topics for more details of the FGDs.

8 Recommendations

The followings are key recommendations from the Workgroup to the various stakeholders in the WSH Community, based on the outcome of the analysis of the survey results, and focus group discussions.

1) WSH Personnel

- a) WSH personnel should acquire suitable skillsets to understand the organisation management strategies, and seek alignment to gain support for required WSH outcomes.
- b) WSH personnel involve in WSH training to acquire some additional knowledge and skills in WSH training curriculum design, delivery, and assessment.
- c) WSH personnel should continue to engage various stakeholders in their organisations in timely and suitable use of SWO to stop and correct unsafe situations.
- d) WSH personnel to have more frequent engagement with top management to establish a good understanding for organisation decision-making process and eventually better in executing their WSH duties.
- e) WSH personnel should proactively seeking opportunities to learn and gain knowledge and skills in critical core skills. (Note: For more information, please visit SSG website <https://www.skillsfuture.gov.sg/skills-framework/criticalcoreskills>)

2) Organisation Management

- a) Organisation management should review organisation resources and structure for WSH management, including the roles and responsibilities of top management in WSH. (Note: organisations may refer to “Code of Practice on Chief Executives and Board of Directors WSH Duties” for guidance.)
- b) Organisation management should establish organisation policy and guidelines on empowering employees and WSH personnel to stop unsafe work and situation, and responsible parties in the organisation to timely and adequately address the issues to prevent incident.
- c) Organisation management should establish regular engagement opportunities for WSH personnel in the organisation for better and more effective WSH decision-making process.
- d) Organisation should identify and provide micro-training (e.g., short duration on-line courses or videos with quizzes) opportunities for employees to keep WSH message, knowledge and skills up to date.

3) Singapore Institution of Safety Officers (SISO)

- a) SISO to establish/formalise mentoring programme for WSH personnel wanting ideas to better their involvement in organisation WSH strategic tasks/work processes.
- b) SISO and other agencies (e.g., e2i) may jointly conduct and publish regular training needs analysis, for both critical core skills and technical skills and competence, for WSH personnel and the larger WSH community in professional development.
- c) SISO to identify, create, publish and/or facilitate on-line micro-training opportunities, promoting awareness in new technologies, information technologies literacy and competency, and tools and techniques.



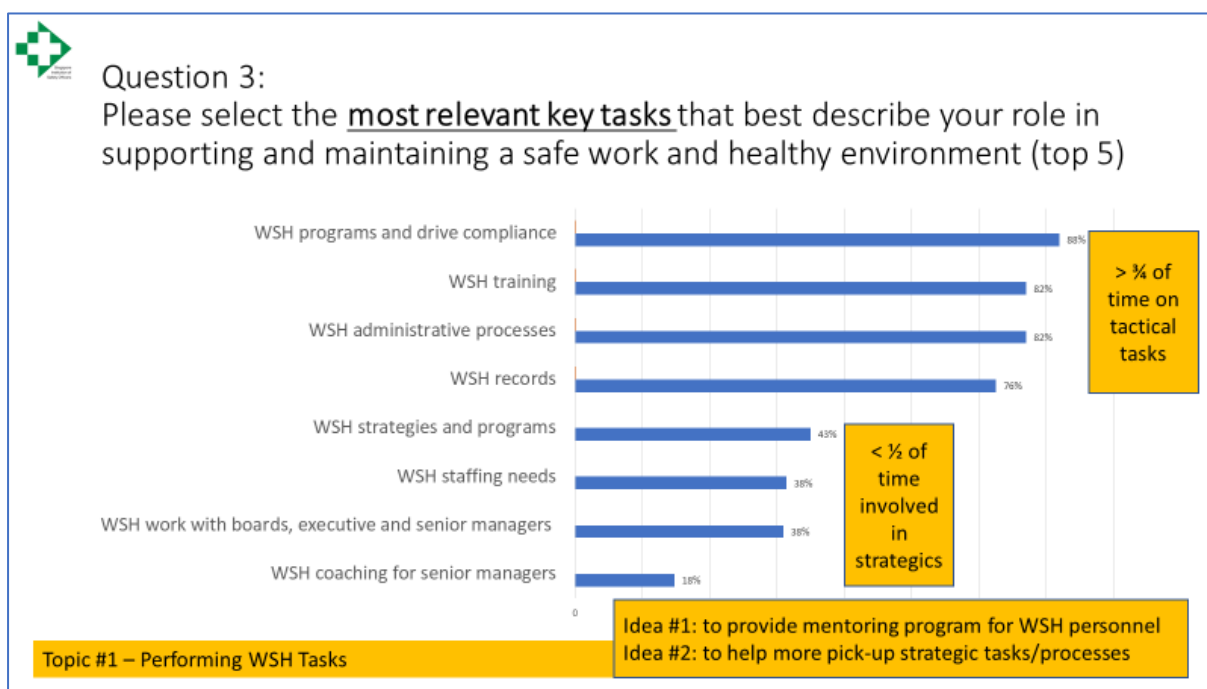
- 4) WSH Training Providers
 - a) Training providers are encouraged to provide more training courses on critical core skills. (Note: For more information, please visit SSG website <https://www.skillsfuture.gov.sg/skills-framework/criticalcoreskills>)

- 5) MOM Occupational Safety and Health Division (OSHD)
 - a) Continual Professional Development (CPD) framework should encourage WSHOs to take up more critical core skills training courses.

Report Prepared By: Lim Sui Soon

Appendix – Six Topics from Survey Results

Topic #1 – Performing WSH Tasks



Comments on data and ideas:

- 1) No surprise.
- 2) On the lower involvement in strategic tasks, WSHOs usually have limited direct access to top management. The organisation's reporting structure affect WSH function engagement with top management.
- 3) Junior WSHO may lacks confidence to talk to CEOs, need courage to bring up issues.
- 4) WSHOs among different organisations tend to have different WSH tasks.
- 5) Besides WSH objectives, top management have other priorities to fulfil as well. Hence, WSHOs need to find out why their management have inadequate involvement in WSH, e.g., budget constraints, lack of awareness on what are needed from them, etc.
- 6) Managing WSH needs a multi-pronged approach, WSHOs need suitable skillsets to appreciate/deduce the top management's priorities as well, and put safety in their term, to get the buy-in.
- 7) WSHO have to acknowledge their role in their organisation. Never pretend to play the role of problem solver unless they are trained and experienced in operating the machine or process plant. They can instead add value by facilitating the problem-solving process with their knowledge of the WSH regulations, ACOP, relevant standards and risk assessment skills.

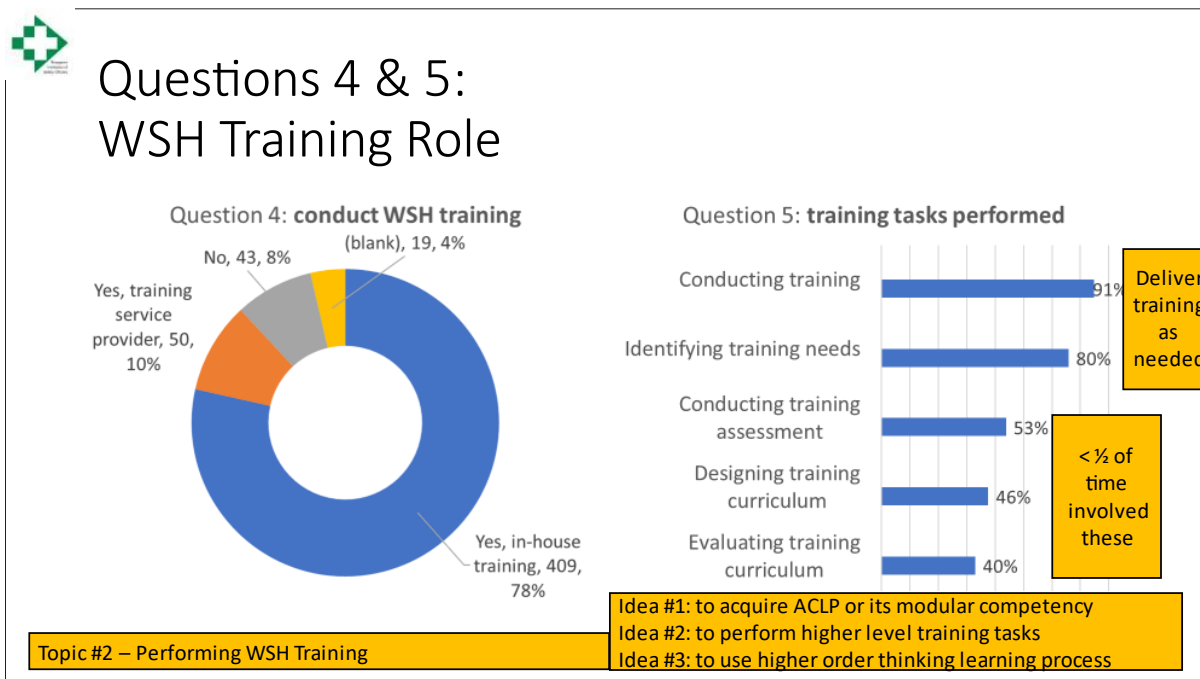
Notes from FGDs:

A) FGD1: Topic #1 – Performing WSH Tasks

- 1) On the lower involvement in strategic tasks, WSHOs usually have limited direct access to top management. The organisation's reporting structure affect WSH function engagement with top management.

- 2) Working in big organisations, top management has too many meetings, the content for discussion on WSH is usually limited. As such, engagement time with top management is also limited.
 - 3) Most organisations in marine industry have top management walking the site/yard in the morning, which usually would have dealt with pressing WSH issues noted. So, in different industry, different management style.
 - 4) Middle management is usually the link for WSHO to CEO, whom may choose to talk or not. WSHOs in such situation may be also felt discouraged from communicating directly with top management.
 - 5) Junior WSHO may lacks confidence to talk to CEOs, need courage to bring up issues.
 - 6) New ACOP for Board of Directors helps getting more top management to be conscious of what are expected of them in terms of WSH.
- B) FGD2: Topic 1. Performing WSH tasks
- 1) WSHOs among different organisations tend to have different WSH tasks.
 - 2) Top management leadership and commitment is crucial for WSH to succeed. No top management's commitment, WSH will fail.
 - 3) Top management is the key duty holder, they need to know their WSH role by taking initiative to engage their WSHOs.
 - 4) Top management should attend training, especially specific courses tailored to high-risk company, such maybe on a directive from MOM.
 - 5) Besides WSH objectives, top management have other priorities to fulfil as well. Hence, WSHOs need to find out why their management have inadequate involvement in WSH, e.g., budget constraints, lack of awareness on what are needed from them, etc.
 - 6) Besides engagement between WSHO and top management, there should be engagement between top management and owner of project on WSH matters.
 - 7) Organisations should make WSH a core value rather than a priority.
 - 8) Managing WSH needs a multi-pronged approach, WSHOs need suitable skillsets to appreciate/deduce the top management's priorities as well, and put safety in their term, to get the buy-in.
 - 9) Proposed that MOM to do more to help ease the tasks of WSHO, e.g., in checking the validity of workers' permit to work, certificates and licenses by mean of technologies such as QR code linking to the workers.
 - 10) WSHO have to acknowledge their role in their organisation. Never pretend to play the role of problem solver unless they are trained and experienced in operating the machine or process plant. They can instead add value by facilitating the problem-solving process with their knowledge of the WSH regulations, ACOP, relevant standards and risk assessment skills.

Topic #2 – Performing WSH Training



Comments on data and ideas:

- 1) No surprise.
- 2) ACLP qualification is beneficial for those WSHOs that have to conduct training extensively, as the ACLP guides trainers to conduct training in a structured way. For WSHOs that conduct training on ad-hoc basis, ACLP may not be necessary.
- 3) Level C qualification would have equipped WSHOs with skills to conduct in-house training for general WSH topics (e.g., risk assessment). They are not qualified to conduct WSQ courses without ACLP qualification. Nevertheless, WSHOs can be better if acquire additional skills to conduct training creatively, so as to attract and retain the focus of the trainees.
- 4) WSHOs should be able to perform TNA so that he can tailor made training courses (i.e., develop training curriculum, how to deliver the training, etc) to meet his company’s requirement.
- 5) WSHOs may use TNA as base for training objectives, curriculum planning and evaluation criteria. Assessment of knowledge can be done through test, quiz and practical assessment.
- 6) WSH trainer has to let his trainees know where did he or she have got it wrong. For WSQ programme; trainer and trainee are given an opportunity to meet F2F at the end of the assessment for this purpose.

Notes from FGDs:

- A) FGD1: Topic #2 – Performing WSH Training
 - 1) ACLP (Advanced Certificate in Learning and Performance) qualification is a must to conduct WSQ courses approved by SSG and MOM, such are usually conducted by external training providers.

- 2) ACLP qualification is beneficial for those WSHOs that have to conduct training extensively, as the ACLP guides trainers to conduct training in a structured way. For WSHOs that conduct training on ad-hoc basis, ACLP may not be necessary.
 - 3) WSHOs should attend (maybe monthly) external training and seminars that help them to communicate with stakeholders better.
 - 4) Level C qualification would have equipped WSHOs with skills to conduct in-house training for general WSH topics (e.g., risk assessment). They are not qualified to conduct WSQ courses without ACLP qualification. Nevertheless, WSHOs can be better if acquire additional skills to conduct training creatively, so as to attract and retain the focus of the trainees.
- B) FGD2: Topic 2. Performing WSH Training
- 1) TNA (Training Needs Analysis) is the starting point; it should come before training objective, e.g., to change belief/raise awareness/technical competency, etc. WSH training should integrate into business itself if it is an in-house training.
 - 2) WSHOs should be able to perform TNA so that he can tailor made training courses (i.e., develop training curriculum, how to deliver the training, etc) to meet his company's requirement.
 - 3) WSHOs may use TNA as base for training objectives, curriculum planning and evaluation criteria. Assessment of knowledge can be done through test, quiz and practical assessment.
 - 4) WSHOs should look for both in house as well as external training resources.
 - 5) Assessment is necessary to check the effectiveness of training. The assessment competency level depends on the context of objective, "hard skill" (operating a machine) must have high passing mark, soft skill can be more flexible.
 - 6) All training conducted must be evaluated to determine if it meets the objective.
 - 7) WSH trainer has to let his trainees know where did he or she have got it wrong. For WSQ programme; trainer and trainee are given an opportunity to meet F2F at the end of the assessment for this purpose.
 - 8) Safety training is a stand-alone item but is part of a bigger program to move thing around.

Topic #3 – Effect of Reporting Structure

Breakdown for WSH Manager (x148) + SWSHO/WSHO (x185) + WSH Coordinator (x77) = 410 respondents

Q10: To what extent do you feel confident in proposing/issuing a STOP WORK ORDER to the company you work with?
- Correlated with “Q8: Who do you report to in your organization?”

Row Labels	Workplace Safety and Health Manager	Senior Workplace Safety and Health Officer	Workplace Safety and Health Officer	Workplace Safety and Health Coordinator	Grand Total
Head of WSH	29%	55%	49%	64%	
Very confident	17%	15%	22%	35%	Oth+Hd WSH -> High Conf
Moderately confident	10%	27%	17%	21%	
Ambivalent	1%	12%	7%	6%	
Not confident	2%	0%	3%	3%	
MD/CEO	44%	24%	19%	13%	27%
Very confident	27%	21%	9%	4%	15%
Moderately confident	12%	3%	7%	6%	8%
Ambivalent	4%	0%	2%	1%	3%
Not confident	1%	0%	0%	1%	1%
Head of Operation /Facilities	25%	18%	31%	19%	26%
Very confident	11%	6%	15%	10%	12%
Moderately confident	9%	6%	9%	7%	8%
Ambivalent	3%	6%	6%	3%	5%
Not confident	2%	0%	2%	0%	1%
Head of HR	2%	3%	1%	4%	2%
Ambivalent	1%	3%	0%	1%	1%
Very confident	1%	0%	0%	0%	0%
Moderately confident	0%	0%	0%	0%	0%
Grand Total	100%	100%			

Mgr+CEO
-> Very Conf

Idea #1: WSH Manager + CEO better WSH decisions
Idea #2: Others + Head of WSH better guidance

Topic #3 – Effect of Reporting Structure

Comments on data and ideas:

- 1) It is **surprising** that survey data shows many junior WSH personnel feel very confident or moderately confident in issuing (internal) SWO for unsafe situations.
- 2) Confidence in issuing SWO could be an indication of the company safety policy and culture. Supportive management would encourage WSH personnel to have confidence to issue SWO.
- 3) WSHOs and WSH Coordinators may still discuss with the top management before issuing significant SWO.
- 4) Some WSHOs may still reluctant to issue SWO if they have an intermediate reporting manager before the top management, they would consult the intermediate manager for direction. Additional controls may be identified as short-term measures.
- 5) Bosses do not like work to be stopped without reasons. In such culture, junior WSHO are reluctant to stop work for fear of offending bosses.

Notes from FGDs:

- A) FGD1: Topic #3 – Effect of Reporting Structure
 - 1) Note: Stop Work Order (SWO) here refers to work activity stoppage that is deem unsafe to continue, this is not referring to full and total shut down of the operations. And, also this is not SWO issued by MOM.
 - 2) Confidence in issuing SWO could be an indication of the company safety policy and culture. Supportive management would encourage WSH personnel to have confidence to issue SWO.
 - 3) WSHOs and WSH Coordinators may still discuss with the top management before issuing significant SWO.
 - 4) Localised SWO is common in manufacturing for work processes needing rectification by responsible party before resuming.

- 5) Some WSHOs may still reluctant to issue SWO if they have an intermediate reporting manager before the top management, they would consult the intermediate manager for direction. Additional controls may be identified as short-term measures.
 - 6) WSHOs should exercise the duties and responsibilities to issue SWO when deem necessary.
 - 7) Most organisations' hierarchy of reporting won't have safety officers reporting directly to the top management, there will inevitably an intermediate manager to oversee the WSH functions. However, organisation's WSH directions usually come from the MD/GM, they set the WSH culture. If they don't have commitment and don't walk the talk, it will be a waste of time for WSHOs or WSH Department to do much to improve safety culture, i.e., top management is the key for WSH.
 - 8) As far as possible, no WSHO would want to risk giving stop work order that affects production too much. There is always the bottom line needing to balance. However, if it is a real and imminent danger, then work have to stop for the sake of safety.
- B) FGD2: Topic 3. Effects of reporting structure
- 1) Issuing SWO is too big an issue as it may affect the production line or the whole project. More appropriate to talk about stop work activities (localised). WSHO will be more willing to stop work activities if they consider unsafe (localised activity stoppage).
 - 2) SWO implementation depends on senior management and company safety culture.
 - 3) It is surprising that survey data shows many junior WSH personnel feel very confident or moderately confident in issuing (internal) SWO.
 - 4) WSHOs need to understand the issue beyond the observation before stopping work, t is a critical and part of WSH personnel responsibilities.
 - 5) Bosses do not like work to be stopped without reasons. In such culture, junior WSHO are reluctant to stop work for fear of offending bosses.
 - 6) Organisation should establish programme to really encourage the lower rank to stop work, empower the workers to stop work when unsafe, not just in name.
 - 7) The mutual trust between boss and subordinate is vital in sustaining a healthy working relationship. The relationship is built on daily exchanges of views and counter views. WSHO should not afraid to share his counter view respectfully. At the same time, WSHO should also be willing to accept critique from bosses when he is later proven wrong.

Topic #4 – Effect of Engagement with Management



Breakdown for WSH Manager (x148) + SWSHO/WSHO (x185) + WSH Coordinator (x77) = 410 respondents

Q10: To what extent do you feel confident in proposing/issuing a STOP WORK ORDER to the company you work with?

- Correlated with “Q9: How often do you engage with the top management?”

Row Labels	Workplace Safety and Health Manager	Senior Workplace Safety and Health Officer	Workplace Safety and Health Officer	Workplace Safety and Health Coordinator	Grand Total
Weekly	36%	33%	27%	42%	34%
Very confident	29%	29%	14%	25%	21%
Moderately confident	8%	8%	8%	10%	10%
Ambivalent	3%	0%	4%	5%	1%
Not confident	1%	0%	1%	1%	1%
Monthly	47%	45%	50%	43%	40%
Very confident	24%	15%	24%	22%	16%
Moderately confident	15%	18%	17%	16%	16%
Ambivalent	5%	13%	6%	4%	6%
Not confident	3%	0%	3%	1%	2%
Quarterly	6%	10%	10%	6%	8%
Moderately confident	3%	3%	5%	4%	4%
Very confident	2%	8%	2%	1%	2%
Ambivalent	1%	0%	2%	1%	1%
Not confident	0%	0%	1%	0%	0%
Half Yearly	2%	5%	4%	3%	3%
Moderately confident	1%	5%	1%	1%	2%
Very confident	1%	0%	1%	1%	1%
Ambivalent	0%	0%	1%	0%	0%
Not confident	0%	0%	0%	0%	0%
Yearly	3%	0%	2%	0%	2%
Moderately confident	2%	0%	1%	0%	1%
Ambivalent	1%	0%	1%	0%	1%
Not confident	1%	0%	0%	0%	0%
Rarely	5%	8%	8%	6%	6%
Moderately confident	2%	0%	3%	4%	2%
Ambivalent	0%	8%	2%	1%	2%
Very confident	2%	0%	2%	0%	1%
Not confident	1%	0%	1%	1%	1%
Grand Total	100%	100%			

Higher Freq ->
Higher Conf

Topic #4 – Effect of Engagement with Management

Idea #1: WSH and management to increase engagement
Idea #2: WSH personnel to enhance inter-personnel skills

Comments on data and ideas:

- 1) No surprise.
- 2) Monthly meeting with top management allows good engagement and communication.
- 3) Engagement with top management is dependence on company culture. Top management will be more serious on WSH matters if the intermediate management helps to add emphasis on issues raised by WSH personnel.
- 4) WSHOs having more frequent engagement with top management would be able to establish a good understanding or the decision-making process and eventually better in executing his WSH duties.
- 5) Regular WSHOs engagement with management is important and should be both ways. It also gives a positive impression to the rest of the staff that WSH is important, and WSHOs more confident in carrying out their duties, including issuing SWO.

Notes from FGDs:

- A) FGD1: Topic #4 – Effect of Engagement with Top Management
 - 1) WSHOs may have limited access to top management, they normally send email to update direct report supervisor/manager.
 - 2) Monthly meeting with top management allows good engagement and communication.
 - 3) Unfortunately, some organisations have more engagement between WSHOs and top management only when there is more accident. Usually, engagement with top management is top down not bottom up, i.e., the top management decides how often to have the engagement session. Management concern of WSH would typically have at least monthly engagement with WSHO to find out what are going-on on the ground. The results

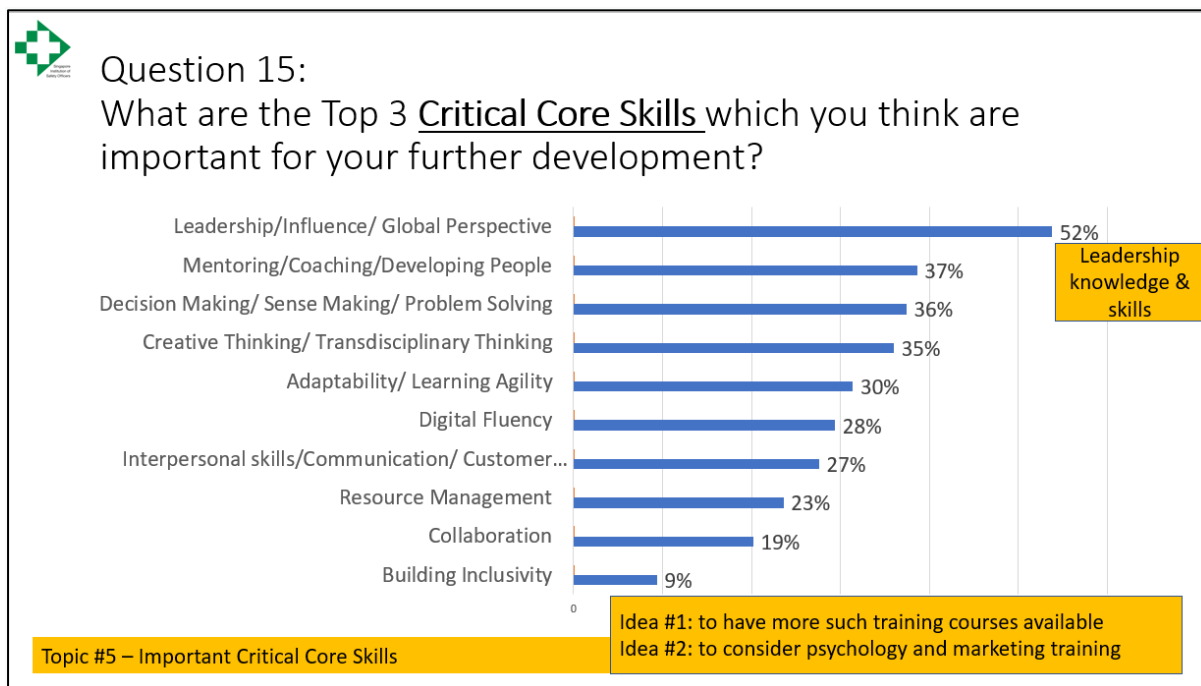
of such engagement also depend on WSHOs if they “dare” to reflect the actual issues on the ground.

- 4) Engagement with top management is dependence on company culture. Top management will be more serious on WSH matters if the intermediate management helps to add emphasis on issues raised by WSH personnel.
- 5) WSHOs may engage or communicate with the top management, but they should not forget to keep their immediate supervisor in the loop.
- 6) WSHOs having more frequent engagement with top management would be able to establish a good understanding of the decision-making process and eventually better in executing his WSH duties.

B) FGD2: Topic 4. Effects of engagement with Top Management

- 1) WSHO should not always highlight non-compliance of legal requirement when engaging top management. WSHO should instead present the issue from the business case angle. Treat WSH as part of the business and hence need to know the interactions with other business functions.
- 2) Bosses do not take ‘no’ as the reply favourably, they expect WSHO to provide solutions as well
- 3) Regular WSHOs engagement with management is important and should be both ways. It also gives a positive impression to the rest of the staff that WSH is important, and WSHOs more confident in carrying out their duties, including issuing SWO.
- 4) Junior and less experienced WSHOs are hesitant in stopping work activities, because lacking in operational control and process knowledge. These WSHOs likely not sure if their judgement is correct in stopping the activity, hence, WSHOs do not like to look foolish if they are later proven wrong. For this reason, WSHOs should find opportunity to learn as much operational and process knowledge in order to overcome this mental hurdle.

Topic #5 – Important Critical Core Skills



Comments on data and ideas:

- 1) No surprise. However, one FGD participant feels WSHOs should focus on core technical skills to avoid “diluting” their attention.
- 2) WSHOs should focus on the core technical skills (e.g., work at heights, confined space assessor), if more soft skills are added they may dilute what are required of the WSHO in performing his WSH duties for the company.
- 3) Soft skills maybe more critical nowadays. For example, WSHOs need to be able to communicate with senior management on WSH issues, or why certain jobs need to be stopped or slowed down to prevent accident from happening.
- 4) WSHOs also need to work on presentation slides and delivering presentation, so such soft skills are critical.
- 5) If more critical core skills are included in Continual Professional Development (CPD) program would help promote WSHOs to take up more of such training courses.
- 6) WSHOs career path development shall not be too limited to just technical skills.
- 7) The current curriculum of WSH personnel training (Level A to D) lacks soft skills that enable WSHO to sell ideas to management. Courses useful may include human factor and use of technologies
- 8) Other skillsets like leadership and communication help WSHO in engagement with their management. If WSHO is perceived as part of the team, they are more receptive to their idea.
- 9) WSHO should self-motivate to take up other skillset other than the WSHO training.
- 10) WSH Coordinator refresher training being proposed should also include soft skills.
- 11) WSH personnel should continue to learn, incorporate soft skill, leadership, communication, networking, etc. WSHO renewal should consider to make soft skills mandatory, and can also help them to progress in the WSH career.
- 12) The CPD framework should encourages WSHO to take up soft skill.

Notes from FGDs:

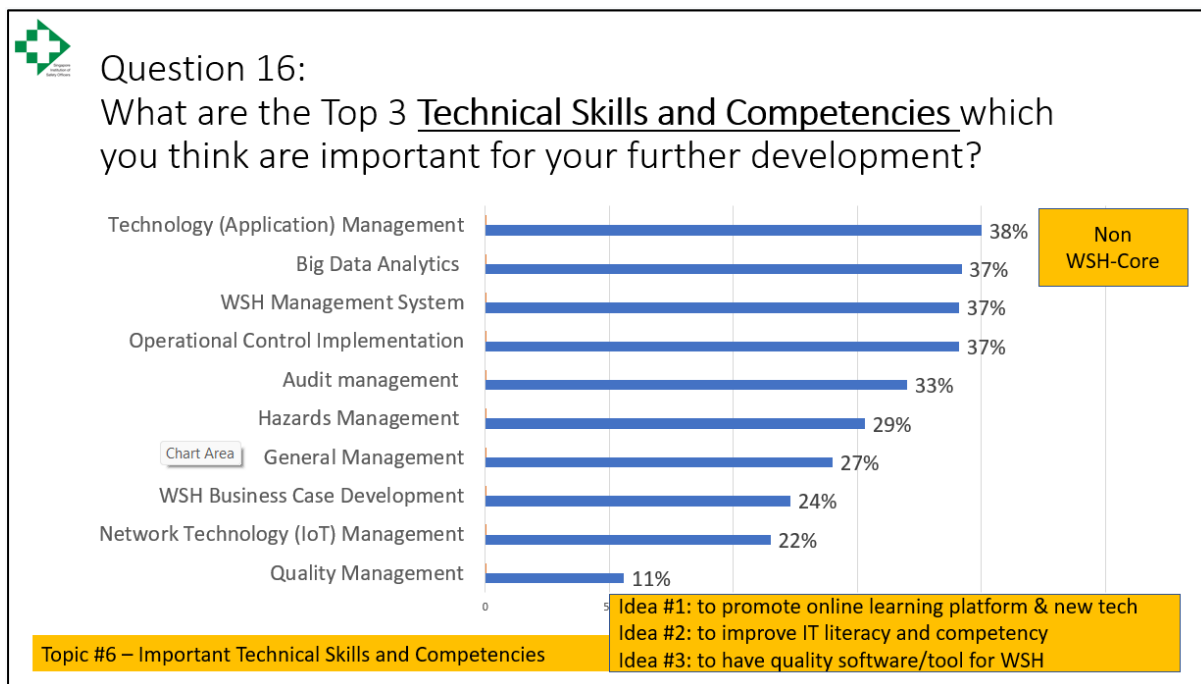
A) FGD1: Topic #5 – Important Critical Core Skills

- 1) WSHOs should focus on the core technical skills (e.g., work at heights, confined space assessor), if more soft skills are added they may dilute what are required of the WSHO in performing his WSH duties for the company.
- 2) WSHOs certified competent in technical skills are able to perform their jobs. On the other hand, soft skills maybe more critical nowadays. For example, WSHOs need to be able to communicate with senior management on WSH issues, or why certain jobs need to be stopped or slowed down to prevent accident from happening.
- 3) WSHOs training already equipped the personnel with the required technical skills. However, WSHOs need to have Continual Professional Development (CPD) in part for renewing registration. MOM and relevant agencies can also identify and promote the necessary seminars or courses to attend to update their knowledge and skills, so that the WSHOs would not stay stagnant. Furthermore, WSHOs also need to work on presentation slides and delivering presentation, so such soft skills are critical.
- 4) Some organisations are already conducting in-house training on critical core skills for management and technical staff as employee development.
- 5) If more critical core skills are included in Continual Professional Development (CPD) Program would help promote WSHOs to take up more of such training courses.
- 6) WSHOs career path development shall not be too limited to just technical skills.

B) FGD2: Topic 5. Important core skills

- 1) The current curriculum of WSH personnel training (Level A to D) lacks soft skills that enable WSHO to sell ideas to management. Courses useful may include human factor and use of technologies.
- 2) Other skillsets like leadership and communication help WSHO in engagement with their management. If WSHO is perceived as part of the team, they are more receptive to their idea.
- 3) WSHO should self-motivate to take up other skillset other than the WSHO training.
- 4) WSH Coordinator refresher training being proposed should also include soft skills.
- 5) WSH personnel should continue to learn, incorporate soft skill, leadership, communication, networking, etc. WSHO renewal should consider to make soft skills mandatory, and can also help them to progress in the WSH career.
- 6) The CPD framework should encourages WSHO to take up soft skill.

Topic #6 – Important Technical Skills and Competencies



Comments on data and ideas:

- 1) No surprise. However, one FGD participant feels basic technical knowledge “are more useful than data analytics, especially for new WSHOs.”
- 2) Many organisations are adopting digitalisation, ability to perform data analysis based on available statistic (e.g., using Power BI) will help to convince the management better as compared to just based on personal opinion.
- 3) Big data analytics is in practice for some to identify contributing factors for accidents or to recommend training needs. Data analysis is a good skill to have.
- 4) MOM or training providers may provide more opportunities or platforms for hybrid or on-line courses.
- 5) Operation control and process knowledge are more useful than data analytics, especially for new WSHOs
- 6) Beyond the commonly talked about drone technology, some other examples of technical skills in use include: VR/AR simulator training, risk assessment software with quantitative data, and real-time monitors and sensors.
- 7) Different level of WSH personnel have different type of skill set – e.g., big data analysis for senior management level. SISO can come out with training need analysis for different levels.
- 8) If SISO and other agencies (e.g., e2i) can jointly conduct TNA for WSH personnel, it will be useful for the WSH community.
- 9) SISO can organize short 1-2hrs on-line courses to promote WSH professionalism.

Notes from FGDs:

- A) FGD1: Topic #6 – Important Technical Skills and Competencies

- 1) Many organisations are adopting digitalisation, ability to perform data analysis based on available statistic (e.g., using Power BI) will help to convince the management better as compared to just based on personal opinion.
 - 2) Big data analytics is in practice for some to identify contributing factors for accidents or to recommend training needs. Data analysis is a good skill to have.
 - 3) Adoption of technology hardware must be done with care (e.g., drone), so as not to cause unforeseen problems.
 - 4) MOM or training providers may provide more opportunities or platforms for hybrid or on-line courses.
- B) FGD2: Topic 6. Import technical skill and competencies
- 1) DfS (Design for Safety), process safety, equipment safety, HAZOP are all helpful to WSHO
 - 2) Operation control and process knowledge are more useful than data analytics, especially for new WSHOs
 - 3) Beyond the commonly talked about drone technology, some other examples of technical skills in use include: VR/AR simulator training, risk assessment software with quantitative data, and real-time monitors and sensors.
 - 4) Different level of WSH personnel have different type of skill set – e.g., big data analysis for senior management level. SISO can come out with training need analysis for different levels.
 - 5) SISO can work with MOM to get data into QR code – worker past accident, machine inspection record, worker’s training record, etc.
 - 6) If SISO and other agencies (e.g., e2i) can jointly conduct TNA for WSH personnel, it will be useful for the WSH community.
 - 7) SISO can organize short 1-2hrs on-line courses to promote WSH professionalism.