International Journal of Manufacturing Economics and Management
ISSN 2784-1278 ISSN-L 2784-1278, Vol. IV, No. 1 / 2024
https://doi.org/10.54684/ijmem.2024.4.1.32

SAFETY GOOD CATCH A LEADING INDICATOR PROMOTES PROACTIVE SAFETY CULTURE AT ASSEMBLY TEST MANUFACTURING

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Abstract: In this project, the studies are carried out at a chipset tester assembly manufacturing with objectives of establishing a safety good catch reporting process for employee to report out any hazard, unsafety condition or unsafe act. In addition, all good catch submissions are analyzed in this study to improve the process or condition at the workplace. Throughout analyzing of all good catch submissions, pareto of hazard is identified to measure effectiveness of existing safety programs and controls. Safety good catch reporting will be served as a safety leading indicator to promote safety culture and awareness for the organization. A proposed safety good catch reporting process is benchmarked with existing quality good catch report program of the organization and DOSH JKKP 6 and JKKP 7 injury report. The proposed process is reviewed thru safety and health committee prior deployment. Later, safety good catch web tool is developed and deployed for employee to submit any safety concern and able to track and record thru the web tool in order to sustain the safety good catch program. Success of safety good catch program deployment across production is verified by safety and health committee and management. The effectiveness of program will be monitored and analyzed thru employee participation, commitment of middle level of management and engineering process owner. A series of program such as safety good catch campaign, communication have been held to promote safety good catch program to boost the employee's participation. Moreover, safety good catch submission is further analysis and identify hazard pareto to improve the process or condition at the workplace. Then measure the effectiveness of existing safety and health programs such as ergonomic risk assessment, job hazard analysis especially when there is new product or process changed, workplace setup, preventive and maintenance task and others. Total 648 safety good catch submissions by 279 employees in this project. There are 3 main hazards identified which is physical, mechanical and ergonomics hazard. Employees who are supporting manual tasks found actively participating the program. In conclusion, safety good catch has been successfully deployed and participated by employee however two main challenges observed throughout the studies, management commitment of timely validation and engineering leadership for continuous improvement. Recommendations such as reporting of good catch submission indicator, enhancement of web tool is needed to further enhance the safety good catch program.
Key words: Safety Reporting, Proactive Safety Culture, Leading Indicator, Incident Reporting, Productivity Improvement

1. INTRODUCTION

According to International Data Corporation (IDC) Worldwide Quarterly Personal Computing Device Tracker, the COVID-19 global pandemic has disrupted business models around the world, continuing business strategies and online education accelerates demand PC centric market comprised of desktop, laptop, notebook and workstation by 14.6% year over year in quarter 3 (Q3), 2020 with shipment volumes reaching 81.3 million units as shown in Fig 1.

Company	3Q20 Shipments	3Q20 Market Share	3Q19 Shipments	3Q19 Market Share	3Q20/3Q19 Growth Market Share
1. Lenovo	19.272	23.7%	17.310	24.4%	11.3%
2. HP Inc.	18.690	23.0%	16.805	23.7%	11.2%
3. Dell Technologies	11.996	14.8%	12.098	17.1%	0.8%
4. Apple	6.890	8.5%	4.959	7.0%	38.9%
5. Acer Group	6.005	7.4%	4.644	6.6%	29.3%
Others	18.419	22.7%	15.091	21.3%	22.1%
Total	81.272	110.0%	70.907	100.0%	14.6%

Fig. 1. Top 5 Companies, Worldwide Traditional PC Shipments, Market Share, and Year-Over-Year Growth, Q3, 2020 (IDC, 2020), [1]

As a chipset manufacturer, one of the enormous challenges is fulfilling the growing of demand over the continuing rise in COVID-19 infections. Hazard such as physiological safety and ergonomic injuries prevention become an essential element in occupational safety and health management during this pandemic crisis (Pierre, 2016) [2]. Proactive injury prevention is crucial for all workers including employee or contractor regardless they are working onsite or working from home to eliminate the negative impact to productivity and cost based on Iceberg Theory (Izatulet al, 2014), [3].

Most of the accidents are due to human behavior instead pure chance (Wilson, 2010) [4]. Traditionally we believed that all these accidents are preventable if we manage it at early stage typically or called as close call. (Doyle, 2020) [5]. Safety Good Catch (SGC) served as leading indicator whereby good catch is concern raised without injury or illness upon reporting. It is different with measuring injury rate and severity from first aids (FA), recordable (REC) or fatality injuries. Injury rate and absenteeism is categorized as lagging indicator (OSHA, 2019) [6]. Some of the safety professional also categorized recordable and beyond injuries as major injuries. The key significant relationship of early-stage injuries and major injuries are the severity of the injuries. Minor injuries and below don't induce lost time of employees while major injuries or beyond will cause lost time such as days away or fatalities.

There are couple safety risk pyramids or triangles are available and commonly practiced by safety professionals to postulate the relationship between hazards and injuries severity (Heninrick, 1931) [7] such as shown in Fig 2. In 1960, F.Bird [8] has revealed between ratio of 9.8 minor injuries or basically called as first aids reported for every major injury which resulting fatalities, disabilities or lost time or medical treatment. All these perspectives strongly believe that early detection would prevent major injuries or fatalities.

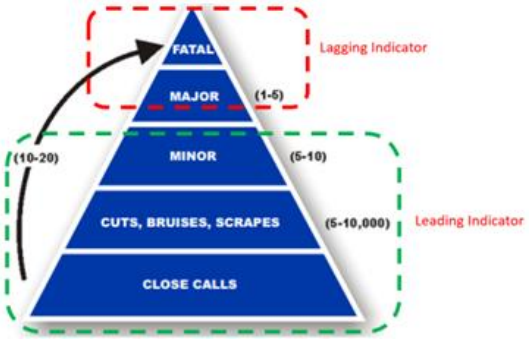

Fig. 2. Safety Indicator by Injuries Severity Categories [8]

1.1. Problem Statement

Safety performance has conventionally been measured with the direct correlation between number of near misses and minor injuries reporting versus reduction of OSHA recordable injury rates or man hours' loss time. There are increased of safety professionals question the effectives of these indicators being predictive enough as future predictors to prevent injury at workplace (Campbell Institute, 2013) [9]. There was also an argument of minor injuries a good leading indicator to predict and prevent injury occurrence thus create an injury or illness free working environment (Bellamy, 2012) [10]. The reason is because minor injury will still endure certain level of pain or discomfort although the pain doesn't induce any loss time. In addition, any accident or injury although there are not man loss hours is categories as lagging indicator. (Payne, 2009) [11]. Since near miss and first aids indicator might not a good indicator to predict or prevent injury or accident. Hence there is a need to establish a better clarify leading indicator which carry the nature of leading indicators suppose being proactive in response and the intent is the make changes in the safety process so that all type of injuries could be avoided (Lehtinenet al,2002) [12]. Production workers are the populations who perform the task, and they will be the affected target when any injury or incident happened. Hence a direct feedback or report from production worker is crucial to surface any hazard and unsafe condition upon their observation (Fatiniet al, 2016) [13]. After the report, an immediate corrective or containment and preventive action should be implemented to eliminate hazard or mitigate the risk and severity. Lastly, the reporting process should be sustainable for continue improvement purpose in production due to people and process change.

1.2. Objective

Establishing a leading indicator through injuries related historical in nature not the only option, predictors of future levels of safety performance prior involving accident or incident would be a better option. Leading indicators relevant to events, conditions or measures that precede an incident or hazard and has a predictive value towards an incident, accident or unsafe conditions are ideal option. The objective of this studies is to:

1) To establish a safety good catch reporting process and its web tool for employee to report out any hazard, unsafe condition and unsafe behavior observed.
2) To monitor the employee participation, management commitment and engineering leadership thru closure of the report in ensuring success of the safety good catch program deployment.
3) To analysis all submitted safety good catches and identify hazard of pareto to improve the existing safety programs and controls.

1.3. Proactive Safety Culture

Accidents and injuries are frequently used as a benchmark for occupational safety performance in conventional safety models (Hovden et al, 2010) [14]. However, the metrics used to assess safety performance are inefficient since accidents and injuries only indicate instances of failure. Additionally, these incidents are uncommon, and the information acquired from them is frequently retrospective and sensitive (Somoray et al, 2019) [15]. Other scholars have conceptualized safety performance in a different way. Safety compliance and safety participation are the two components that Griffin and Neal suggested. Safety compliance refers to the mandatory behaviors that employees must exhibit in order to achieve the basic minimum standards of workplace safety likes wearing protective clothes and following safety procedures (Griffinet al, 2000) [16], Safety involvement, on the other hand, refers to behaviors that go beyond these very minimum safety criteria. There may not be any direct impact on employee safety, but these behaviors help to foster a safe working atmosphere. Voluntary safety involvement generally involves supporting coworkers, encouraging workplace safety programmes, showing initiative, and making an initiative to improve workplace safety (Griffinet al, 2000) [16]. Safety culture drives sustainability of safety performance. If the safety culture is wrong, safety related processes will not be going to work effectively and safety performance won't be improved and sustained (Cooper, 2001) [17]. Proactive safety behavior is gaining prominence in general occupational and health safety research. Curcuruto and Griffin suggested that workers must be proactive in promoting safety and must collaborate with coworkers and management to create substantial improvements in workplace safety (Curcurutoet al, 2016) [18]. Proactive safety behaviors include raising concerns when safety issues develop, suggesting recommendations during meetings, modifying dangerous practices, and reporting unsafe and risky circumstances to management. Proactive safety culture means all level of employees in the organization assume the ownership and anticipating and responsive to incidents. As a result, reduction in accident or injuries. (Scatterling, 2019). [19]
Relationship of safety culture maturity and safety performance of mining industry been examined by Stemn's team in year 2019. In Eric's [20] research concluded mines with lower incidence rate consistently had higher safety culture maturity score for the elements than mines with higher incidence rate.

2. MATERIALS AND METHODS

A flow chart as shown in Fig. 3 is a representation of the sequence of steps for data collection, problem identification, re-design the process activities and results analysis. DOSH injury and illness report is a reporting process for incident causes injury or illness; hence injury or illness related information is redundant for safety good catch report. This is because no injury or illness induced during good catch reporting stage. However, information of notifier, description of process involved, and its hazard type should be made known during the safety good catch reporting process. In addition, with exploration to existing quality good catch program, subject matter review, manager's validation and improvement action is also a critical element to be copy exactly to the good catch report. Safety good catch reporting concept, process and its web tool is reviewed and buyoff thru safety and health committee prior proposed to top management for blessing.

2.1. Design and Development of Safety Good Catch Reporting Process

During performing new task, modified task or routine task, employee is required to stop and makes a safety good catch report when observes any hazard, unsafe conditions, or behavior. Submission of the observation can be done through safety good catch report web tool that developed. The submission is routed to employee's manager and safety personnel for validation and approve for next step. Supervisor and safety expert approves validity of safety good catch based on company safety and health program, standard policy and also standard operating procedure. Status of good catch is changed from "open" to "approved" by supervisor or safety expert if the good catch is valid. Once the good catch has been approved, corrective action or preventive action is assigned to engineering owner for continuous improvement to eliminate or mitigate the safety concern. Action required (AR) is captured

in the web tool under function of "Add AR" by supervisor or safety expert, timeline is determined for every AR captured. Assigned AR is updated from "open" to "closed "in the system by engineer once action taken placed. A closure validation is conducted by safety expert again once AR closure updated by engineer. The submitted safety good catch status is further changed from "approved" to "closed" after validation of safety expert as shown in Fig. 4.

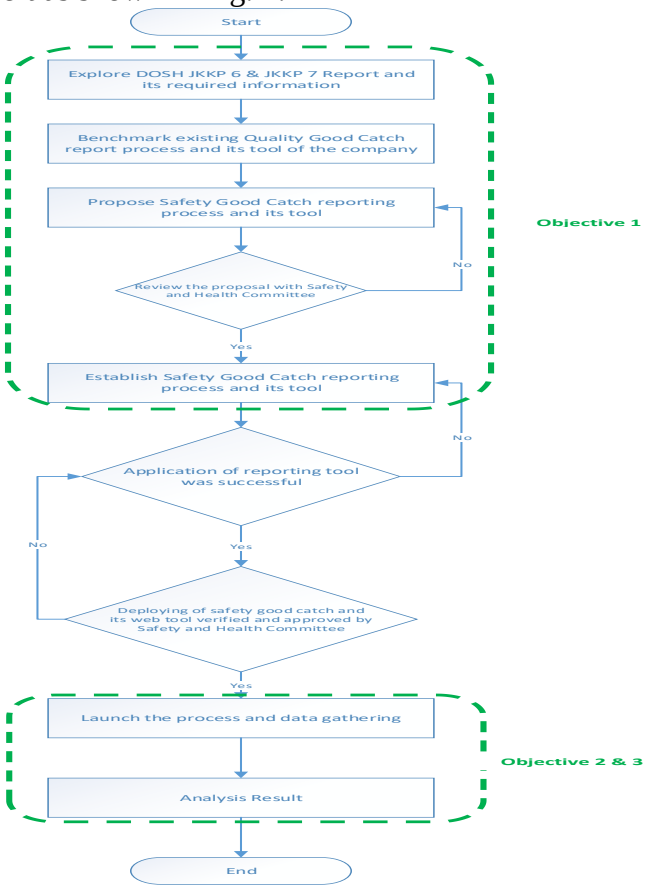

Fig. 3. Flow Chart of Research Methodology

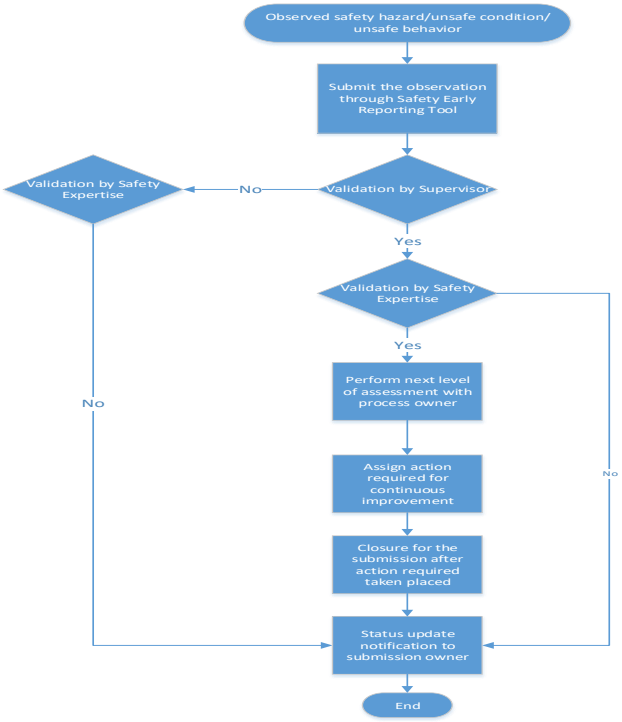

Fig. 4: Process Flow of Proposed Safety Good Catch Reporting

2.2. Good Catch Reporting Submission Tool

A web tool is developed to support safety good catch reporting process. This web tool has the capabilities of recording, notifying, escalating, tracking, reporting all the report made. Employee able to access the reporting tool from any desktop personal computer (PC) in the manufacturing floor or cafeteria. Based on the web tool design, information of and supervisor to employee details such as name and shift would auto-filled by system once employee log into the PC. This would minimize the time consume and made the reporting leaner for submitter. To further improve web tool from user friendly perspective, dropdown list is made available for hazard, sub hazard and its area detected for employee to select. This could minimize the fill in error and keep information accurate and precise. Sample of the Good Catch Reporting can be found in table 1.

Table 1. Good Catch Reporting Submission Details by Employee

Good Catch Report ID:	Auto-generate by tool
Category:	
Created By:	Auto-generate by tool based on window log in account
Creator's Supervisor:	Auto-generate by tool
Created Time (Shift):	Auto-generate by tool
Validated By:	Fill after review by manager and subject matter expert
Validated Time (Shift):	Auto-generate by tool
Due Date:	
Hazard Category:	Dropdown list is available
Hazard Sub Category:	Dropdown list is available
Area Detected:	Dropdown list is available
Suggestions/Comments:	
Immediate Containment Action:	
Help Needed:	
Ticket Severity:	
Problem Description:	
Recognition:	Fill by manager
Repeat:	

Validation for Approval, Improvement and Closure

All good catch reports is reviewed and approved by submitter's manager then safety expertise of the area upon successfully submitted by creator. Creator of the good catch reports can be any employee from the organization regardless its seniority or job title. A timeline has been set for every level of review process to ensure all submissions been properly attended in timely manner. Second level of the management is engaged if review duty not been conducted. All escalations are automatically escalated thru good catch reporting web tool.

Ownership to lead and perform hazard identification and assessment is assigned by manager and safety expertise of the area. Key stakeholders to conduct hazard identification and assessment are process engineer, safety representative, EHS engineer and on-duty operation manager. There is also a timeline is included during ownership assigned. An explanation by the owner is required if the timeline is unable to achieve. Method of interview, direct observation, five why incident investigations, etc is applied during the assessment to determine the root cause, risk level and severity.

A hazard prevention and control is taken place after the assessment. Hierarchy of control is leveraged to determine containment actions, corrective actions and preventive actions. A timeline for each of the action required is aligned and defined by all stakeholders. A clear ownership of each of the action required is captured and updated in the web tool. Submitter of the good catch report is notified via email about the review and improvement conducted. Submitter able to track their submission and its status details through the web tool as well.

All the assigned action owner is required to provide update in the web tool upon the closure of their action required. Action owner must update what are the action been taken to close the good catch reporting. The web tool then further escalates the closure to safety expert for closure review. This

process is critical to ensure action required being taken in place. Safety expert can reject the closure If doubt with the implementation upon verification.

3. RESULTS AND DISCUSSION

Reviewing of employee participation and commitment by management and process owner is critical to measure safety culture and maturity level the organization while hazard reported analysis is reviewed to measure the effectiveness of existing safety and health programs such as ergonomic risk assessment, job hazard analysis especially when there is new product or process changed, workplace setup, preventive and maintenance task, and others.

The safety good catch web tool has been pilot and deployed for production mode in January 2021. Each of the safety good catch submission is validated, approved, review and recorded thru safety good catch tool. Safety and Health committee led by safety content expertise from respective operations and engineering process representative able to view all safety good catch immediately once submission is done by employee. Based on the monitoring by safety and health committee, minimal escalations reported related to web tool performance such as accessing web tool and unexpected server down. However, escalations above have been rectified by IT personnel within acceptable timeframe.

Safety good catch submission rate and level of employee participation is monitored by safety and health committee in monthly basis. There are 3 types of status been monitoring and tracked by the committee, open, approved and closed. Safety good catch carried with status of open once is submitted successfully by employee. The safety good catch then routed to supervisor of employee for validation and approval. After approved by supervisor, the safety good catch status changed from open to approved. During supervisor's approval process, supervisor is expected to assign the action required to engineering process owner for improvement. A timeline will be set to ensure safety good catch that submitted by employee is properly attended and fixed. Safety good catch status will be revised from approved to closed once action required is completed by process owner upon review of safety expert. Once the safety good catch is closed, employee who created the safety good catch will be informed with status and action taken too. An auto email escalation mechanism is enabled to employee's supervisor in ensuring timely validation and approval. In addition, supervisor of process owner is informed for right level attention when process owner did not close their action required per timeline set. Analyzing and trending good-catches data may maximize its effectiveness and identify opportunities for safety and system improvement in the company.

Fig. 5 shows information about the monthly rate or quantity of total safety good catch submission in 2021 including the open status. From the chart, submission trend by employ and its status shown from month to month over a 2021 year. Every safety good catch has been reviewed and approved by supervisor to verify the validity of the submission. According to chart shown in Figure 4.1, most of the safety good catch submission in 2021, which is 92% has been closed while 5.4% of the submission was in "Approved" status which the improvement actions still on-going due to the process or product design changed required which usually will take longer completion period. Only 3% of the safety good catch submission is still with open status due to 2 months' buffer time given for the verification timeline and part of the submission have been missed out due to no triggering or reminder to the respective superior for the approval.

In term of the safety good catches submission rate, the results shown that the peak happened in the month of June which contributed the highest submission rate, total 141 cases followed by July, 139 cases, both months had contributed 43% of the total number of submissions in year 2021 based on the pareto chart. However, the submission rate is low when beginning of the program which only total 15 (2.3%) and 17 (2.7%) number of submissions shown in January and February. Then, the submission rate started to increase in March (49, 7.5%), April (43, 6.6%) and May (50, 7.7%) compared to previous months. Subsequently, we observed a significant uptrend of the submission rate during mid of the year with highest submission rate which mentioned in above.

Due to low response in the beginning of the year, some introduction activities about the SGC program were conducted to the middle management group in order to increase the awareness of the employee such as monthly communication, meeting and interview session with supervisor and set the submission goal for each operation area started in March. However, there was no significant improvement observed after the awareness introduction activities been implemented which only about average 18% of the improvement seems within March, April and May. Hence, company has organized safety good catch campaign in mid of the year in conjunction of the EHS day which bringing more interesting and fun to the safety reporting and safety good catch program as well to provide more encouragement of the participation from more employee. During the campaign, training and demo were presented to the employee and also the road show activities to encourage employee involvement by submitting the safety good catch on the spot with rewards and recognition given. From there, we can see the obvious uptrend of the submission rate in June and July which is 3 times increased to the previous 3 months, from average 47 submissions to average 140 submission in June and July. Therefore, the campaigns have helped company promote the reporting of safety good catches practice in June& July and support a non punitive safety culture with recognition and rewards.

Fig. 5. Monthly Safety Good Catches Submission Trend

Nevertheless, Fig. 5 reveals that there has been a rapid decrease trend in the number of safety good catches submission in system since August and continuously till end of the year. Survey has been conducted and the outcome reveals that the production ramp activity was happened in Quarter 3 (Q3) of the year 2021 resulting the submission rate was dropped which majority of the employee were more focus on their production ramp supporting activities. Besides, the company also has tightened the validation process by excluding building repair request related defect such as tile broken, dented ceiling board which more applicable to the facilities team monitoring then caused to the submission rate fall.

Furthermore, the analysis has been performed on the safety good catch submission rate by respective operation area as shown in Fig 6. The pie chart has clearly shown that FOL, MOL, EOL and Integration 2 operation area were more active in the safety good catch reporting compared to other area such as material preparation, Integration 1 and 3 areas. This top 4 submission rate area was basically contributed by the Integration 2 area with highest rate which is 27% (174), followed by FOL, 24% (155), MOL, 21% (137) then 15% (95) from EOL area. These 4 areas were already in the full ramp production mode. The survey findings show that the employee from these 3 operation areas mostly aware that safety management is very important in the manufacturing production, especially they were working at the production area that involved and required a lot of the manual process and product handling. Although the products are processed with the machine but still need to involve human to perform the tasks manually, for example, load and unloading, visual inspection, mechanical assembly, product handling or transportation such as manual flip, rotate and transfer the product from upstream to downstream which required push and pull the cart or hand carry activities from the operator. In addition, the complexity of the products will be getting increased and especially those heavy large form factor products which is about 8kg also require more and special safety handling process by operator. With this condition, there is more opportunities for the employee to observe the safety

condition of the area and come out the improvement idea then help to improve and minimizing in term of the potential safety concern and risk in their production area.

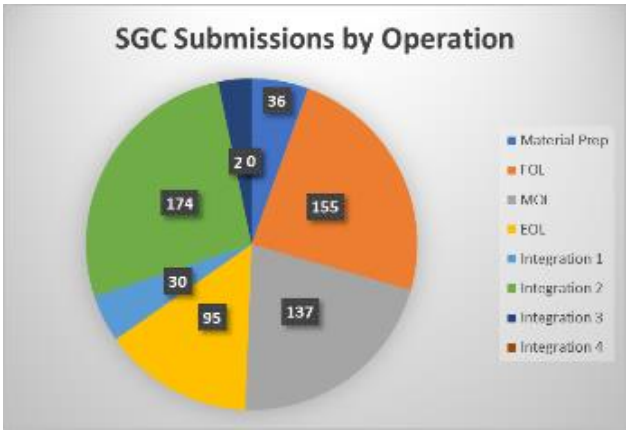

Fig. 6. Safety Good Catch Submission by Operation

However, the material preparation area showing low contribution from the employee which only reported total 36 safety good catch cases, contributed for 5% of submission in year 2021. The common reason that caused to the low response was related to the safety concern awareness is lower among the material preparation area employee compared to other areas. We observed that the participation of the employee in the Safety Good Catch Campaign from this area also much lower. They might miss out the interesting part of this campaign. Hence, this has reduced their exposure to more opportunity and encouragement on the safety good catch reporting activities and safety mindset cultivation.
While for Integration 1 and Integration 3 area, basically both of these areas were in the soft production loading mode in 2021. The main difference compared to other Integration areas was more processes have been designed and set up with automated process. It cannot be denied that the automation process has replaced part of the manual activities from employee with the automated machine, tool and system for operation and handling activities. In additional, soft production loading mode with more automation process definitely required lesser headcount of operators for the production run support. Hence, these have helped to minimize the safety concern and risk eventually the safety good catch submission rate was lower compared to other full ramp production area with more involvement of manual handling activities. Lastly, the data indicated no found any safety good catches been submitted by Integration 4 area in year 2021 because it is the new area set up which dedicated to run the engineering build of new product started mid of December instead of manufacturing production. Hence, we can't see any safety good catch submission yet in 2021.

Discussion

There are 2 challenges feedback over the 6 months monitoring by safety and health committee, timely validation and approved by supervisor of creator and timely closure by action required owner. Although Fig. 4 shown 6 good catches still under open but then overall challenges does not reflect thru Fig. 5 because web tool is only captured the latest status of safety good catch. There is limitation of safety good catch web tool whereby time taken of a safety good catch changing from one status to the other has not been made feasible to user. Safety expert or the committee requires to closely follow up with supervisor or process owner for closure.
A safety and health committee meeting had been held pertaining to timely validate, approval and closure in Jun 2021, 5 on-duty supervisors and process engineering have been invited into this meeting for further understand their challenge and difficulty on reacting to safety good catch approval and closure. Couple of difficulty claims by supervisor as they are not aware on the safety good catch submission by employee and unable to re-act on time. System doesn't have auto trigger right after submission by employee. Supervisor will be reminded though auto email triggering when no approval done within 7 days after submission. The email is act like a reminder instead of triggering mechanism.

Besides that, supervisor has no idea how to react when employee reported injury thru good catch reporting. However, safety and health committee have also concluded that supervisor is committed towards quality and productivity issue compared to safety after the conversation from the meeting. Similar commitment issue also found within engineering group. Safety good catch been deprioritized by process owner compared to quality good catch, due quality good catch commonly will lead to line down condition and requires fast response and disposition. The consequences and implication is more severe compared to safety good catch as safety good catch is a leading indicator and normally it doesn't carry any implication of injury or illness. In addition, process owner unable to extend the timeline due to closure timeline is determined by supervisor who are the good catch approver and certain good catch raised requires improvement involves process or product design change. Normally the process or product design change takes time.

Safety Good Catch Campaign was held in Jun 2021. The campaign has been held for a week to cover 4 shifts production employees from the factory. Total 358 employees had participated across a week campaign. The main theme of the campaign mainly to advertise safety good catch program and its reporting tool, cultivate safety culture and awareness, injury reporting and standard of operation production (SOP) compliance. During the campaign, safety good catch program sharing, and demo were presented to the employee and the road show activities to encourage employee involvement by submitting the good catch on the spot with rewards and recognition given. In addition, others safety program also been shared to employee to refresher their safety and health knowledge. Program such as personal protective equipment (PPE) requirements and important of compliance, scheduled waste (SW) management, safety messages such ergonomic tips sharing have been organized thru exhibition, mini games and poster mode. Safety good catches submissions increased during the campaign month, Jun 2021 and also one month of the campaign. Safety good catch campaign has resulted total 141 and 139 safety good catches submitted respectively in month Jun and Jul 2021.

4. CONCLUSIONS

Safety good catch program and safety good catch web tool have been successfully deployed across factory in year 2021.Total 279 employees who have participated the submission and contributed 648 of safety good catches. As per good catch submission analysis, top 3 hazard pareto, physical, mechanical and ergonomics have been analysis and identified to served as a leading indicator in preventing safety injury or illness if hazard doesn't been mitigated at early stage. The results of the submission analysis had identified hazard pareto thus triggered the needs to revisit and improvement existing safety programs and safety controls especially on wire management and workstation handling usage requirement during workstation setup, re-assess the frequency and quality work of preventive and maintenance by our technical support group. Revisit trolley preventive and maintenance frequency and its effectiveness, EMO functionality preventive and maintenance requirements at Integration 2due to mechanical pinching and crunching hazard, the needs of ergonomic assessment for all workstations at FOL, MOL and EOL operation. Although safety good catch program has been successfully deployed however there are feedback and also challenges captured such as participation observed degrading in Q3 and Q4 2021, timely validating and approval by supervisor due to tool triggering mechanism and commitment. In addition, commitment challenges also found within engineering process owner. In ensuring safety good catch program able to sustain as safety leading indicator, participation by all level of employees are crucial at all times including production ramp mode.

The future recommendations for safety good catch reporting program is to establish a safety good catch program key indicators measurement such as safety good catch submission quantity and safety good catch closure rate, and report all key indicators consistently to senior management in weekly basis to overcome the middle level management commitment challenges such as supervisor. Besides that, a continuous of advertising of safety good catch program is needed to sustain the reporting of safety good catch. A safety good catch reporting can be integrated into new hires orientation program to educate the safety good catch submission and importance of employee's participation. Thus

cultivate a proactive safety culture especially to new hire employees. In addition, continue to enhance the web tool is required with real time triggering mechanism to supervisor for timely validation and approval. Timely validation and approval will assure timely recognition to employee who are putting effort to improve safety culture of the organization.

Funding: This paper was supported by the Master of Manufacturing system engineering program vote number 62172.
Conflicts of Interest: There is no conflict of interest.

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Received: March 15, 2024 / Accepted: June 15, 2024 / Paper available online: June 20, 2024