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Har vi nået målet? Interview med Henrik Sønderby, CODAN

The art of measuring safety performance. Af Erik Green



Arrangement: Measuring safety

Onsdag d. 17. december, Herlev Hospital

Obs! Dette program har vakt så stor interesse, at der desværre ikke er plads til flere deltagere. Til gengæld har dette nummer af SimTrans News to indlæg om måling af sikkerhed.

How can safety be measured to support the continuing improvement of safety? Erik Hollnagel and Sidney Dekker argue that our wellknown and widely implemented measurements tend to be misleading and thus an unfortunate waste of the limited resources dedicated to safety. We measure failures rather than successes, and we focus on what we believe to be precursors of accidents, but rarely are. Are there better and more useful ways of measuring safety?

SimTrans, DHFN and IDA-Risk have invited the two leading safety experts to present their views and suggestions and debate their usefulness and implementations with a representative from CODAN, an insurance company strongly emphasizing both measurements and improvements. We also invite the audience to participate in this discussion.

Præsentationer fra foredragene vil som sædvanlig være tilgængelige på SimTrans' [hjemmeside](#) efter jul.

Programme

- 13.00 **Welcome and intro**, *Profesor Henning Boje Andersen*, DTU Management
- 13.10 **Why do we wish to measure safety?** *Profesor Erik Hollnagel*, University of Southern Denmark
- 13.40 **Measuring safety: The absence of negatives or the presence of positive capacities?** *Professor Sidney Dekker*, Griffith University Australia
- 14.10 **We need a quantitative measure of safety.** *Henrik Sønderby*, Claimstop Advisor Codan Insurance
- 14.20 **Coffee break**
- 14.40 **On-stage debate on how safety can be measured** between *Hollnagel, Dekker and Sønderby*. Moderator *Peter K. Sorensen*, Vice President FORCE Technology
- 15.20 **Interaction with the floor and the three debaters.** Moderator *Peter K. Sorensen*, Vice President FORCE Technology

Program with further information about the presentations can be downloaded from the SimTrans [website](#).

Har vi nået målet?

Hvis en af CODANs kunder har et stort antal skader, får de i dag en mulighed for at reducere skaderne, inden forsikringspræmien bliver hævet. SkadeSstop Rådgiver Henrik Sønderby fortæller om arbejdet med at forbedre sikkerheden sammen med kunderne.

Af Jacob Thommesen

CODAN tegner forsikring for forskellige transportvirksomheder inden for både vejtransport og søfart, mens jernbane og luftfart har deres egne forsikringsselskaber. For få år siden var løsningen på problemet at opkræve en højere præmie for at få dækket et større antal skader, men i dag får virksomheden også en anden mulighed: de får et tilbud om at få en skadekonsulent fra CODAN tilknyttet i et år.

Et mønster i småskader

Som mål for sikkerhed ser forsikringsselskabet først og fremmest på kroner og øre og i den forbindelse ser man på skadesprocenten, dvs. skadesomkostninger i forhold til virksomhedens indbetaling til forsikringsselskabet over et år. Derudover ser man på skadefrekvensen, dvs. hvor ofte skaderne opstår.

Når Henrik Sønderby besøger en virksomhed, ser han på, hvad virksomheden har af skadesrapporter, også for skader under selvrisko. Han kigger også efter synlige 'tegn' på uheld, f.eks. på bunker af gamle dæk hos et transportfirma: hvad er der sket med dem? Hvilken type skader, og hvordan er de opstået? Han kigger således efter mønstre i små ulykker/småskader – mønstre, som er forvarsel om større ulykker.



Et eksempel kunne være en vognmand, der stabler meget store bunker grus på deres lastbiler: gruset flyger let af under kørslen og kan give irriterende skader på forruden hos dem, der kører bagefter. De kan reducere skaderne ved at gøre bunkerne flade – og dermed opstår der færre skader fra tabt grus. Det økonomiske perspektiv er nemlig vigtigt. Henrik Sønderby ved, at CODANs kunder i transportbranchen er økonomisk

hårdt pressede, og fokuserer derfor på forslag, der ikke er alt for kostbare.

Svært at tale om adfærd

Forandringerne handler også ofte om adfærd. Hvis chaufføren accelererer hurtigt og bremser kraftigt, kan der let opstå uheld. En chauffør skal helst køre lidt dovent dvs. accelerere og bremse stille og roligt. Men det er ofte en udfordring at tale om 'adfærd' med kunden og deres medarbejdere. Det lyder som om man vil holde dem personligt ansvarlige for skaderne, men det er ikke meningen – det er snarere et spørgsmål om kultur. Og derfor er det godt, at skadestop samarbejdet kører over et tidsrum.



En grisetransport, hælder efter en punktering, og dyrene er klemt efter at være skredeet ud til den ene side.

Efter et år udfærdiger Henrik Sønderby en rapport, hvor han vurderer, om virksomheden har gennemført de aftalte forbedringer, og om det er lykkedes at reducere skaderne. Normalt lykkes det, og virksomhederne er glade, fordi de både slipper for en større præmie og selv sparer de også penge til selvrisko og andre ekstra udgifter, som de selv betaler. Henrik Sønderby har netop afsluttet en skadestop samarbejde med en virksomhed, der fik reduceret skadesprocenten fra 180 til 10! I en anden virksomhed var de nærmest skuffede, da han sagde farvel efter et år, men den dybere mening er jo, at ledelse og medarbejdere selv skal kunne arbejde med sikkerhed.

Det er dog ikke alle virksomheder, der er lige engagerede i forbedringerne. Han oplever også virksomheder, hvor man nikker og smiler, når han kommer med sine forslag, men hvor der ikke rigtig er sket noget. I de tilfælde ender virksomheden med at betale en større præmie.

En effektiv indsats?

For at vurdere, om forbedringerne er gennemført tilfredsstillende, ser CODAN og Henrik Sønderby på effekten på omfanget af skader. Hvis det er lykkedes at reducere skadefrekvensen og skadesprocenten, bliver det ikke nødvendigt at forhøje præmien

Men hvad nu, hvis virksomheden gennemfører de foreslåede ændringer, men uden rent faktisk at

reducere skaderne, dvs. hvis de af CODAN foreslåede ændringer viser sig at være uden effekt?

Det problem har Henrik Sønderby ikke oplevet. Han har stor erfaring med at se mønstre i skaderne og i samarbejde med virksomheden finde relevante og effektive forbedringer.



1 Den blå søjle viser skadeprocent. Den brune antallet af skader. For denne kunde koster hver skade 20.000 kr. i selvrisiko.

Kan man altid se – og måle – effekten inden for et år? Der er vel også ændringer, der først vil have effekt efter længere tid - hvis de f.eks. er rettet mod mindre hyppige hændelser (og skader)?

Henrik Sønderby forklarer, at hans indsat er rettet mod skader, der repræsenterer meget synlige udgifter for CODAN - og en høj skadeprocent for virksomheden. Det drejer sig således om skader, der er relativt hyppige. Og han fokuserer sammen med virksomheden på simple ændringer med en tydelig og direkte effekt.

Har CODAN brug for at måle sikkerhed på andre parametre end de skader, der faktisk er opstået? Kan en kunde undgå en højere præmie ved at dokumentere, at man har nedsat risikoen for en ulykke?

Her er Henrik Sønderby enig i nogle af de problemer Sidney Dekker peger på i sit oplæg til SimTrans-seminaret d. 17. december. Sidney Dekker skriver, at nogle af vores traditionelle mål for sikkerhed er slået fejl. Man tæller småulykker og nærvedhændelser, men de har vist sig ikke altid at være indikator for sikkerheden.

Ubrugelige blandt chauffører og havnearbejdere

Rapportering af nærvedhændelser er således ubrugelig inden for Henrik Sønderbys område, hvor det er svært få chauffører eller havnearbejdere til at indrømme fejl. En chauffør foretrak således selv at betale en mindre skade på den bil han havde ansvaret for – i stedet for at rapportere til vognmanden og få denne til at betale udgiften.

Det er simpelthen ikke en del af kulturen, hvor tonen ofte er hård, og der ikke er plads til at vise svaghed. Modviljen mod at rapportere fejl handler således mere om kulturen blandt kollegerne end frygten for at miste jobbet. Og denne underreportering gør det umuligt at bruge nærvedhændelser som mål for sikkerheden: lave tal er derfor ikke altid en troværdig indikator for høj sikkerhed.

Som forsikringsselskab har CODAN også svært ved at bruge småulykker som mål for sikkerheden, da man jo ikke modtager rapporter om skader under selvriskoen. Men når Henrik Sønderby besøger en virksomhed, sørger han for at indsamle alle skadesrapporter, også om mindre skader, fordi de tegner det mønster, der resulterer i større skader.

Er det reelt det samme mønster? Man har nogle gange oplevet, at en virksomhed har fokuseret meget på succes'er med at nedbringe mindre ulykker, men helt har overset faren for større ulykker, der ofte kan have helt andre årsager.

Succes'er har pædagogisk værdi

Kunne Henrik Sønderby og CODAN se en fordel i at måle sikkerhed på succes'er snare end ulykker? Erik Hollnagel kritiserer i sit oplæg til d.17.december 'Safety I' for at fokusere på det, der går galt, mens 'Safety II' i stedet skal fokusere på succes'erne. Vi bør derfor måle sikkerhed på alle de mange gange, hvor det lykkes at opretholde sikkerheden og dermed undgå hændelser og ulykker.

Kan CODAN bruge positive mål for sikkerhed?

Henrik Sønderby påpeger, at et forsikringsselskab nødvendigvis må se på de skader, der opstår, og dermed på ulykkerne. Men det har stor pædagogisk værdi at bruge succes'er i dialog med kunderne.

Henrik Sønderby deltager i arrangementet d. 17. december

The art of measuring safety performance

Developing a language to articulate our safety performance

**The limits of my language means
the limits of my world.**

Wittgenstein (1889-1951)

*yB Erik Green, Partner, Managing Director,
Green-Jakobsen A/S*



If we are to measure safety performance we need to recognise that there is no single reliable measure only. But if we don't have one reliable measure what can we do then? Are traditional KPI's the best way of measuring safety performance? What kind of measurement makes sense? What indicators can tell us what, and what indicators are useful to apply?

This article argues that multiple inputs providing information on a range of H&S activities are required and that we need to find a supplement to the use of lagging and leading indicators. This article therefore introduces the Safety Condition Indicator (SCI) as defined by Green-Jakobsen.

The idea behind SCI is to provide shipping companies with predictive indicators and a language to better articulate the present business unit safety performance. This offers a start to a qualified dialogue about how well we are doing and what we can do proactively. The ambition of this article is also to offer the reader a conceptual understanding of SCI and the value of a shared safety language.

Our ability to articulate safety performance

H&S performance measurements are used as a tool to help prevent workplace injury and disease. The primary purpose of measuring H&S performance is to provide information on the progress and current status of the strategies, processes, behaviours and activities applied by the organisation and its staff to mitigate H&S hazards and risks. However, the question

is: What kind of performance measurements should we have in place to become better at preventing workplace injury and diseases?

Putting Wittgenstein's quote above into a performance measurement perspective the objective must be – for us to understand our 'world of safety performance' better - to increase and extend our ability to articulate (in language) our true H&S performance. Otherwise we end up describing our safety performance in an inconsistent manner, because as Wittgenstein also said: Whereof one cannot speak, thereof one must be silent.

Many people might at this stage object and claim that H&S performance is hardly a subject without a language and some might even claim that we – like this article – spend too much time discussing safety performance. But the question is not whether or not we should discuss it more or less. The key question is: Is our ability to articulate our perception of the safety performance of an appropriate quality? We believe that this is not the case. If we are to improve our safety performance further, an improved 'articulation' about company safety performance is pivotal.

Typical problems with traditional H&S performance measurements

Whether a particular event results in an injury is often a matter of chance, so it will not necessarily reflect whether a hazard is under control. A ship crew could have a low injury rate because of luck or fewer people exposed, rather than good health and safety management. Also it is important to note that due to humans' extraordinary ability to adapt to the conditions under which they work they tend not to get hurt. So when looking at traditional safety performance data the following issues have to be underlined:

- You can be safe by accident – Often injury rates do not reflect the potential severity of an event, merely the consequence - For example, the same failing to adequately guard a machine could result in a cut finger or an amputation.
- Experiencing no injuries can lead to complacency – Good injury statistics can make crew believe that everything they do is safe
- Performance data is predominantly reactive - There must have been a fail-

ure, i.e. injury or ill health, in order to get a data point.

- Injury statistics reflect outcomes, not causes – The true condition of the safety climate is not reflected by leading and lagging indicators.

Because of the drawbacks associated with the use of injury and ill health data alone as a means of measuring performance, some organisations have recognised they need more proactive or 'up stream' measures of performance. Generally this is translated into a search for things which can be easily counted, such as numbers of training courses or numbers of inspections also defined as leading indicators.

The way we can measure safety performance

H&S performance measurement data are needed by those employees of the organisation (departments, ships, business units etc.) who have impact on the H&S performance. These will include CEO's, directors, senior managers, fleet managers, (Marine & Tech) superintendents, HSEQ professionals, Captains, ship crews etc. They all need data appropriate to their position and responsibilities, providing them with a safety per-

formance understanding that helps them articulate good and bad safety issues.

To elaborate further on our ability to articulate our present safety performance it is time to discuss the various types of performance indicators that help us understand what we are looking for. If a performance indicator is to be of any value the indicator has to provide information on the progress and current status of the strategies, processes, behaviours and activities applied to mitigate hazards and risks to health and safety.

But indicators have focus areas and limitations. There is no 'one-size-fits-all' performance indicator and we therefore need to understand which indicators are usable for what. Traditionally the focus has been on lagging and leading indicators, but as seen below Green-Jakobsen see the Safety Condition Indicators as an 'in-between' indicator helping to measure the actual safety condition. We must emphasise, however, that we don't suggest that lagging and leading indicators should no longer be used.

The table below describes the differences between the 3 types of indicators, how they can supplement each other and their positives and negatives.



Lagging Performance Indicators – The history and results	Safety Condition Indicators – The present condition	Leading Performance Indicators – The efforts we make
<p>Definition Lagging indicators measure a company's incidents in the form of past accident statistics. They look at the collective result of total safety capabilities. Examples include:</p> <ul style="list-style-type: none"> • LTIF's • FAC • Worker's compensation costs • Fatalities 	<p>Definition Safety condition indicators measure for the safety climate reflecting how safety has been over a given period. Examples include:</p> <ul style="list-style-type: none"> • Employee perception of the workplace safety climate • Employee perception of e.g. the quality of the toolbox-talks made • Manager/officer assessment of employee safety competencies • Employee perception of the extent of e.g. the use of safety tools, PPE etc. 	<p>Definition Leading indicators measures activities believed to have a positive and developing impact on the safety performance. Examples include:</p> <ul style="list-style-type: none"> • Number of implemented safety training initiatives • Number of initiatives made to improve e.g. safety tools • Number of safety audits carried out • Percentage of employees who have undergone e.g. safety training
<p>Why use lagging indicators?</p> <p>Lagging indicators are the traditional safety metrics used to indicate progress toward compliance with safety rules. These are the bottom-line numbers that evaluate the overall effectiveness of safety performance. They tell you how many people got hurt and how badly.</p>	<p>Why use condition indicators?</p> <p>Condition indicators focus on the quality of safety processes and perceptions expressed and shown by employees at the work place. If these are assessed to be poor a potential hazard could be apparent and – if not corrected – predict an unwanted event. Condition indicators offer the company and its employees a starting point for a dialogue (language) about safety before an accident.</p>	<p>Why use leading indicators?</p> <p>Leading indicators measure the development activities influencing safety performance and continuous improvement. These measures are proactive in nature and report what improvement measures the company and its employees are taking on a regular basis to prevent injuries.</p>
<p>Lagging indicator drawbacks</p> <p>The major drawback to only using lagging indicators of safety performance is that they are reactive. They tell you how many people got hurt and how badly, but not how well your company is doing at preventing incidents and accidents.</p> <p>The reactive nature of lagging indicators makes them a poor gauge of prevention. For example, when officers or managers experience a low injury rate, they may become complacent, when in fact, there might be numerous risk factors present in the workplace that can contribute to future injuries.</p>	<p>Condition indicator drawbacks</p> <p>Condition indicators are not 100% accurate. They only indicate subjective employee perceptions of the present safety performance.</p> <p>Nor do excellent predictive indicators offer any kind of guarantee that no one will get hurt.</p> <p>Condition indicators come with a delay. They are not a 100% dynamic. By the end of the day the crews' ability to anticipate, predict and react to hazards and risks at the workplace is the decisive factor.</p>	<p>Leading indicator drawbacks</p> <p>Leading indicators state what you are doing trying to become better but they don't necessarily state the impact of the initiatives taken. Doing something is not the same as achieving anything.</p> <p>The positive nature of leading indicators often leaves staff with a feeling of doing a lot and thereby misleading their perception of company safety performance. For example, when managers see that many safety activities are made, they might believe that they are achieving big results.</p>

Safety Condition Indicators

The purpose of the Safety Condition Indicator is to provide management with predictive indicators and a language to articulate the actual safety condition/performance helping them to react before anything goes wrong. The DNA of the Safety Condition Indicator is that it is predictive. It is not a clinical tool offering objective and black/white measurements.

It addresses areas that – evaluated either good or bad – predicts the business units (e.g. ship crews) ability to manage work in a safe manner. The indicator does not offer objective evidence of the likelihood of either avoiding or getting hurt, but it offers the business unit a strong starting point for a dialogue about the present safety condition. A critical condition is a clear indicator of a stressed ability to obtain a safe working environment. In order to develop a 'safety performance

condition language' Green-Jakobsen suggests focusing on the following 4 areas:

	Focus area description	Examples of areas that could be assessed
1	Crew safety competencies – What gets evaluated can potentially be developed. If we wish to improve crew safety competencies we need to evaluate these. A strong indicator of the present safety performance is the level of crew competencies. Poor safety competencies and understanding will result in a poor safety performance in the long run.	Intervention – How good is the seafarer at intervening and allowing others to intervene self when something is perceived unsafe? Insight - How extensive is the seafarers' understanding of e.g. company risk management tools? Influence – To what degree does the seafarer have a good or bad influence on others' safety performance?
2	Crew satisfaction with company safety tools – To work safely work checklists, reporting procedures, risk assessment forms etc. have been prepared and implemented. But to what degree is the crew satisfied with these safety tools? If crews dislike the safety tools the likelihood of shortcuts in the use of the tools will increase. In case of poor safety tools companies need to respond.	Risk Assessment – To what degree are the seafarers satisfied with the companies' implemented risk assessment tools? Safety reporting – To what degree does the seafarers find that company safety reporting procedures and tools are easy to manage? Application of safety tools – How satisfied is the crew with the way that company safety tools are applied?
3	Employee perception of safety climate – To ensure safe operations it is important to ensure smooth crew safety communication, cooperation, involvement etc. If the on-board crew experiences a safety climate where crew members are not listened to, communicated with, involved in e.g. toolbox talks the overall safety performance will be perceived as poor.	Involvement – To what degree does the crew feel that they are involved in the formal risk management processes? Communication – To what extent does the crew feel that safety is an integral part of the daily communication? Mutual respect – To what degree does the crew feel that they are allowed to voice their safety related concerns? Crew Safety Performance – To what degree does the crew feel that they discuss and evaluate their own safety performance?
4	Percentage and number of safety processes actually taking place – Safe working practices require the application of agreed processes such as toolbox talks, risk assessments, involvement of crew during risk assessment etc. The degree of application indicates to what extent the crew lives the precautionary measures believed to help mitigate safety hazards and risk.	Application of safety tools – To what extent does the crew feel that company safety tools are applied as defined in company safety management system? Toolbox-Talk – To what extent does the crew feel that Toolbox-Talks actually take place? Process participation – To what extent does the crew feel that they participate in e.g. the risk assessment processes?

Conclusion

The most important benefits of Safety Condition Indicators are that they help shipping companies:

1. Articulate a better understanding of the business unit's (e.g. a ship) actual safety condition and performance and
2. Giving them a tool do decide, what proactive safety performance initiatives they need to take in order to mitigate identified safety hazards and risks.

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