

# SANDVIK'S JOURNEY USING METRICS TO HELP DRIVE EHS CULTURE CHANGE



**SÄKU** Säkerhets  
Kultur  
Nätverket



# STUART EVANS

HEAD OF EHS – SANDVIK GROUP, VP EHS BA MINING & ROCK TECHNOLOGY

- Involved with EHS for nearly 40 years
  - Mining companies
  - Government (regulators)
  - Nuclear
  - Consultancy (mining, oil & gas, power generation)
  - Manufacturing / Sales / Service
- Fields of work
  - Radiation Safety
  - Occupational Hygiene
  - EHS Management Systems
  - Culture Change
- Based in Perth, Australia (but travel a lot!)



# SANDVIK

42,000 employees in 110 countries around the world

## 3 Core Business Areas

- Sandvik Machining Solutions
- Sandvik Materials Technology
- Sandvik Mining & Rock Technology

### Sandvik Mining and Rock Technology (SMRT)

A leading supplier of equipment and tools, service and support for the mining industry. We also provide solutions and knowledge in a wide range of applications such as quarrying, recycling, demolition, tunnelling, civil engineering and dimensional stone.

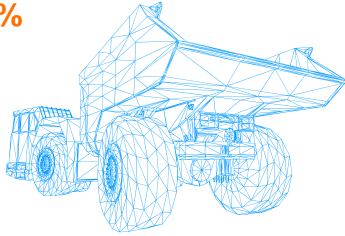
SMRT consists of 9 Divisions: Crushing & Screening, Load & Haul, Mechanical Cutting, Parts & Services, Rock Tools, Rock Drills & Technologies, Rotary Drills, Surface Drilling & Exploration and Underground Drilling.



# ENHANCING PRODUCTIVITY, PROFITABILITY AND SAFETY

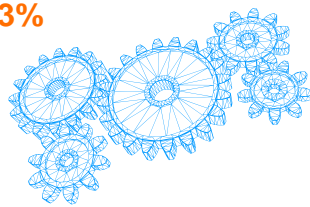
## MINING

34%



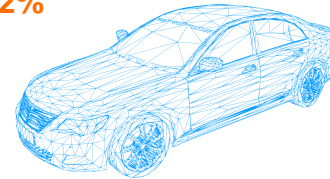
## ENGINEERING

23%



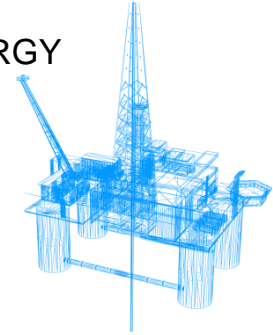
## AUTOMOTIVE

12%



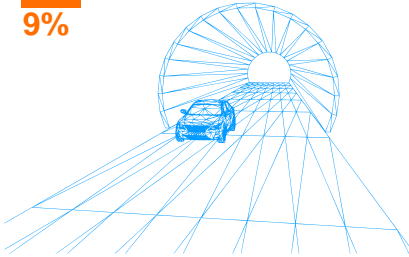
## ENERGY

11%



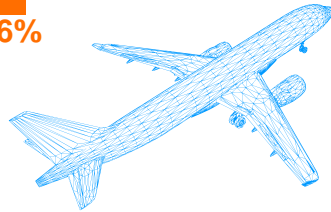
## CONSTRUCTION

9%



## AEROSPACE

6%



## OTHER

5%

■ Share of Group total 2018 revenues by customer segment.



WE BUILD CIRCULARITY	WE SHIFT CLIMATE	WE CHAMPION PEOPLE	WE PLAY FAIR
<p> More than 90% circular</p> <p>We will drive the shift to more circular business models and use of resources, finding ways to close loops and generate new revenue streams from the processes and materials we use.</p> <p>CUSTOMERS</p> <ul style="list-style-type: none"> <li>Material and resource efficiency improvement part of all development projects</li> <li>Develop business models for recycling/circularity for our customers</li> </ul> <p>OPERATIONS</p> <ul style="list-style-type: none"> <li>Our products including packaging material shall have at least 90% material circularity</li> <li>Halve waste in our production processes</li> </ul> <p>SUPPLIERS</p> <ul style="list-style-type: none"> <li>Require 90% circularity for key suppliers</li> </ul>	<p> Halve the CO<sub>2</sub> impact</p> <p>We will deliver on our commitments to reduce impact on the climate. We are aiming to shift mindsets and outcomes in our own business, for our customers and with our suppliers to help reach our targets.</p> <ul style="list-style-type: none"> <li>CO<sub>2</sub> improvement part of all product development projects</li> <li>Value proposition to our customers shall always include verified CO<sub>2</sub> reduction potential</li> <li>Halve the CO<sub>2</sub> foot print from our own production</li> <li>Halve the CO<sub>2</sub> foot print for transportation of people and products</li> <li>Require halving of CO<sub>2</sub> foot print from our key suppliers</li> </ul>	<p> Zero harm to people</p> <p>We aspire to the highest standards for people and we will keep stepping these standards up higher and higher. Our goal is Zero Harm.</p> <ul style="list-style-type: none"> <li>Health &amp; Safety improvements part of all product development projects</li> <li>Health &amp; Safety/risk analyses with all products and services</li> <li>Halve Total Recorded Injury Frequency Rate (TRIFR) and occupational illnesses</li> <li>All Sandvik employees to be offered health and well-being programs</li> <li>Require health &amp; safety improvements plan to reach Sandvik standards from key suppliers</li> </ul>	<p> Always do the right thing</p> <p>We will constantly aim higher in ethics and transparency, being a leader in playing fair and being open.</p> <ul style="list-style-type: none"> <li>Know Your Customer (KYC) process leading to active, sustainable choices</li> <li>Increased transparency on sustainability targets and results</li> <li>Proactive and agile Compliance system fully embedded in business operations</li> <li>Diverse and inclusive workforce with at least one third female managers</li> <li>Everyone engaged in community involvement with a significant positive impact on society</li> <li>All suppliers compliant with Sandvik Supplier Code of Conduct</li> </ul>

## OUR ENABLERS

How we'll drive  
the change

### PERFORMANCE MANAGEMENT

Integrated within performance management systems and part of the incentive program for top managers

### IDEAS HUB

Create sustainability idea program with 100,000 sustainability ideas or innovations proposed by 2030

### THE SHIFT CHAMPIONS

Sustainable business partner award implemented (like Wilhelm Haglund Medal)

### GOOD GOVERNANCE

Well functioning and efficient governance, through The Sandvik Way and the Sandvik Code of Conduct

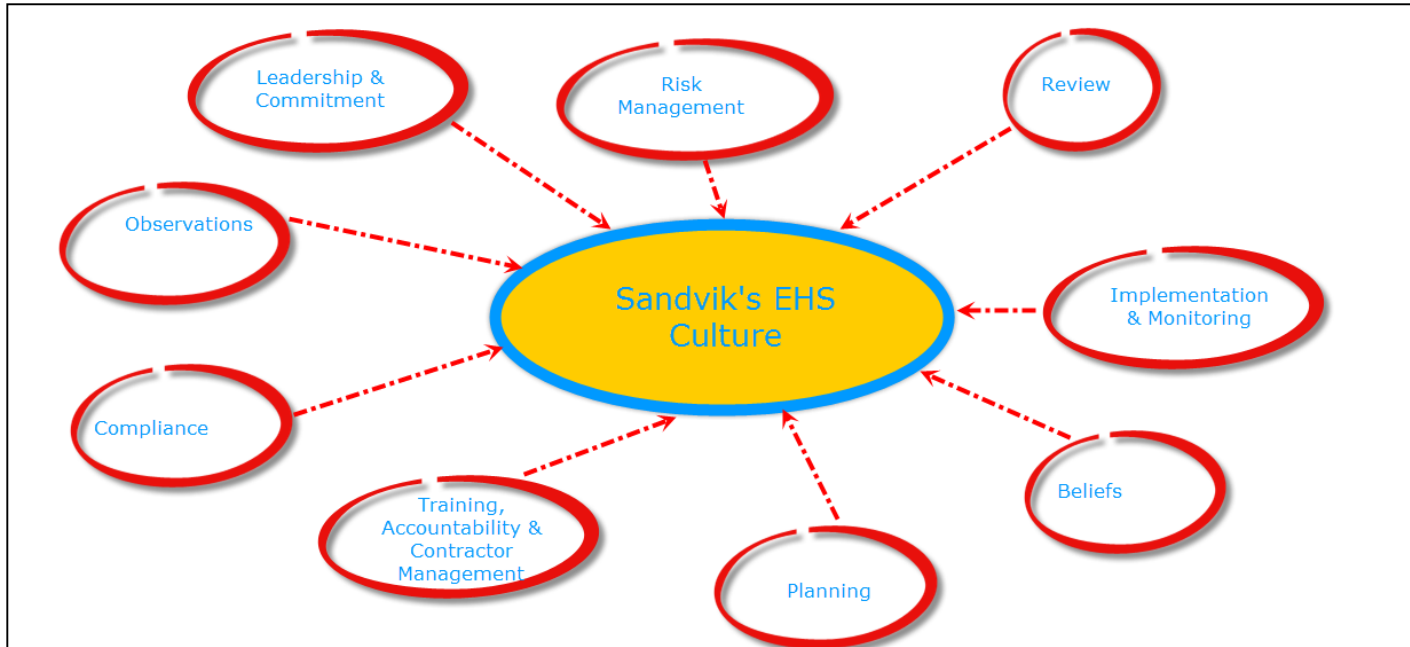
### TRANSPARENCY

We will drive change through transparency of our progress, learnings and ways of working



# HELICOPTER VIEW OF HOW I SEE EHS

Finding the right balance between CULTURE & SYSTEMS



Behaviours



Attitudes



Culture



# “IN THE BEGINNING THERE WERE SPREADSHEETS.....”

## Counting Lost Time Injury Numbers

CHOOSE NORMALISATION FACTOR 1,000,000	Country	Segment / Region	Number Of			Exposure Hrs			Fatales		LTI		Days Lost	
			Employees	Contractors	TOTAL	Employees	Contractors	TOTAL	Employees	Contractors	Employees	Contractors	Employees	Contractors
JANUARY 2006														
	Sweden	Supply	604		604	67,829		67,829						
	Sweden	Logistics			0			0						
Totals			604	0	604	67,829	0	67,829	0	0	0	0	0	0
FEBRUARY 2006														
	Sweden	Supply	604		604	67,829		67,829			1		9	
	Sweden	Logistics			0			0						
Totals			604	0	604	67,829	0	67,829	0	0	1	0	9	0
MARCH 2006														
	Sweden	Supply	604		604	67,829		67,829			1		9	
	Sweden	Logistics			0			0						
Totals			604	0	604	67,829	0	67,829	0	0	1	0	9	0
APRIL 2006														
	Sweden	Supply	604		604	67,829		67,829			1		9	
	Sweden	Logistics			0			0						
Totals			604	0	604	67,829	0	67,829	0	0	1	0	9	0
MAY 2006														
	Sweden	Supply	604		604	67,829		67,829			1		9	
	Sweden	Logistics			0			0						
Totals			604	0	604	67,829	0	67,829	0	0	1	0	9	0

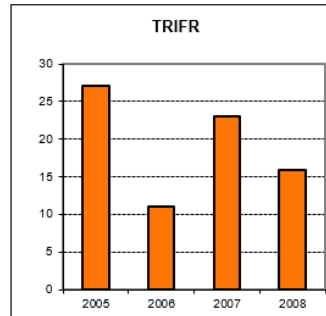
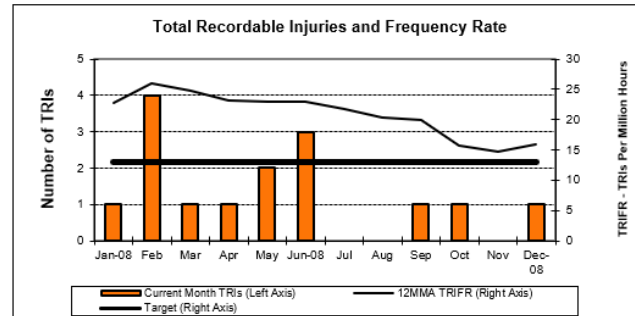
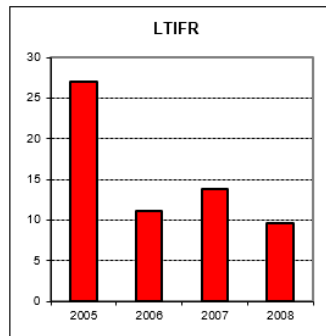
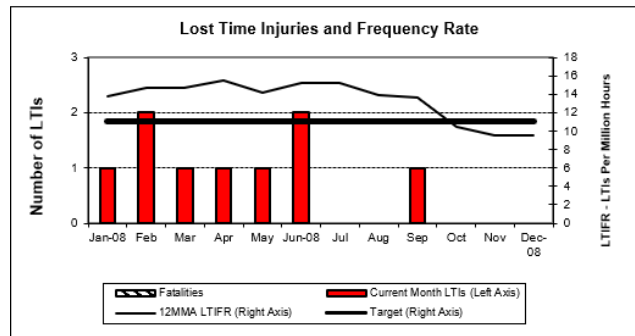
# “IN THE BEGINNING THERE WERE SPREADSHEETS.....”

And then more Incident Types, and better data

A CHOOSE NORMALISATION FACTOR 1,000,000	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
	Country	Segment / Region	Number Of			Exposure Hrs			Fatals		LTI		Days Lost		RWI		MTI		MI		SPI		Near Misses	
			Employees	Contractors	TOTAL	Employees	Contractors	TOTAL	Employees	Contractors	Employees	Contractors	Employees	Contractors	Employees	Contractors	Employees	Contractors	Employees	Contractors	Employees	Contractors	Employees	Contractors
JANUARY 2007																								
	Sweden	Supply	468	27	495	66,750	3,780	70530											4					11
	Sweden	Logistics	23		23	3,145		3145			1			2					1		1		1	0
Totals			491	27	518	69,895	3,780	73,675	0	0	1	0	2	0	0	0	0	0	5	0	1	0	12	0
FEBRUARY 2007																								
	Sweden	Supply	468	27	495	60,419	3,780	64199			1		7						2		1		5	
	Sweden	Logistics	23		23	2,627		2627											1				2	
Totals			491	27	518	63,046	3,780	66,826	0	0	1	0	7	0	0	0	0	0	3	0	1	0	7	0
MARCH 2007																								
	Sweden	Supply	465	27	492	66,154	2,730	68884			1		2		1								3	
	Sweden	Logistics	41		41	5,952		5952											0				2	
Totals			506	27	533	72,106	2,730	74,836	0	0	1	0	2	0	1	0	0	0	0	0	0	0	5	0
APRIL 2007																								
	Sweden	Supply	463	27	490	59,951	2,730	62681									1	1					3	
	Sweden	Logistics	22		22	2,298		2298											2		1		1	
Totals			491	27	518	62,249	2,730	64,979	0	0	0	0	0	0	0	0	1	1	2	0	1	0	4	0
MAY 2007																								
	Sweden	Supply	471	27	498	63,558	3,643	67201			1		3						7				17	
	Sweden	Logistics	39		39	5,437		5437					2										0	
Totals			510	27	537	68,995	3,643	72,638	0	0	2	0	5	0	0	0	0	0	7	0	0	0	17	0

# “IN THE BEGINNING THERE WERE SPREADSHEETS.....”

And graphs, lots of graphs .....



# “IN THE BEGINNING THERE WERE SPREADSHEETS.....”

## And Definitions

<b>Fatal Injury / Illness (FI / FIL)</b>	An Injury / Illness that results in the death of a Worker.  Fatalities are included in the Lost Time Injury / Illness statistics.
<b>Permanently Disabling Injury / Illness</b>	An Injury / Illness that results in a permanent disability to a person with no likelihood of return to Normal Duties (e.g. paraplegia, amputation of arm or leg, severe head injury, emphysema).  Such Injuries / Illness will be recorded as Lost Time Injuries / Illness for statistical purposes but will be considered in the same category as fatal Injuries / Illness for assessments of Future Risk Potential.
<b>Lost Time Injury / Illness (LTI / LTIL)</b>	An Injury / Illness / Illness that results in one or more Days Lost from work at some time (not necessarily immediately) after the shift in which the Injury / Illness occurred.  A Lost Time Injury / Illness must only be recorded once in the month that it occurred i.e. regardless of whether there are Days Lost in subsequent months.

<b>Restricted Work Injury / Illness (RWI / RWIL)</b>	An Injury / Illness where the Worker does not have any Days Lost, but is unable to perform Full Normal Duties.
<b>Restricted Work Days</b>	Number of calendar days when a Worker can attend work but cannot perform Full Normal Duties.  Restricted Work Days can result from either a Lost Time Injury / Illness (i.e. as part of the rehabilitation process) or from a Restricted Work Injury / Illness (i.e. no Days Lost)  Note that Restricted Work Days are recorded separately from Days Lost. For example, a Worker could have 5 Days Lost and then have 10 Restricted Work Days from the same incident.

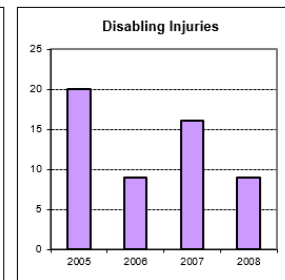
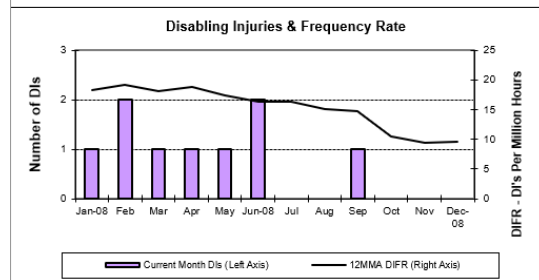
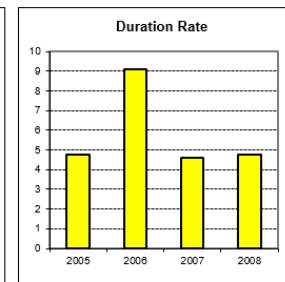
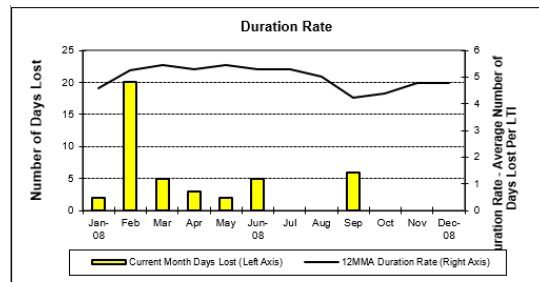
<b>Medical Treatment Injury / Illness (MTI / MTIL)</b>	An Injury / Illness that results in a Worker not being able to return to their Normal Duties immediately following any treatment for that Injury / Illness (i.e. for the remainder of the current shift), but where they are / would have been able to return to Normal Duties on the next calendar day.  To assist in deciding if an Injury is to be classified as a MTI or a MI, the following additional information is provided  If the treatment given is listed below, then the Injury shall be classified as a MTI (ie rather than a MI).  Medical Treatment is: <ul style="list-style-type: none"> <li>given by, or under the specific order of, a physician or a licensed health care professional; or</li> <li>that which would normally be given by a physician or a licensed health care professional.</li> </ul> Examples of medical treatment are:
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<b>Duration Rate (DR / DRIL)</b>	Average number of Days Lost per (Fatal Injuries + Lost Time Injuries) OR Average number of Days Lost per (Fatal Illness + Lost Time Illness)  $DR = \frac{\text{Number of Days Lost in Time Period}}{(\text{Number of FIs} + \text{Number of LTIs}) \text{ in Time Period}}$ (Currently not widely used in Sandvik, but occasionally requested by customers)
<b>Restricted Duration Rate (RDR / RDIL)</b>	Average number of (Days Lost + Restricted Work Days) per (Fatal Injury + Lost Time Injury + Restricted Work Injury) OR  Average number of (Days Lost + Restricted Work Days) per (Fatal Illness + Lost Time Illness + Restricted Work Illness)  $RDR = \frac{(\text{Number of Days Lost} + \text{Number of Restricted Work Days}) \text{ in Time Period}}{(\text{Number of LTIs} + \text{Number of RWIs}) \text{ in Time Period}}$ (Currently not widely used in Sandvik, but occasionally requested by customers)

# “IN THE BEGINNING THERE WERE SPREADSHEETS.....”

And some Definitions we only used for some Customers, with graphs

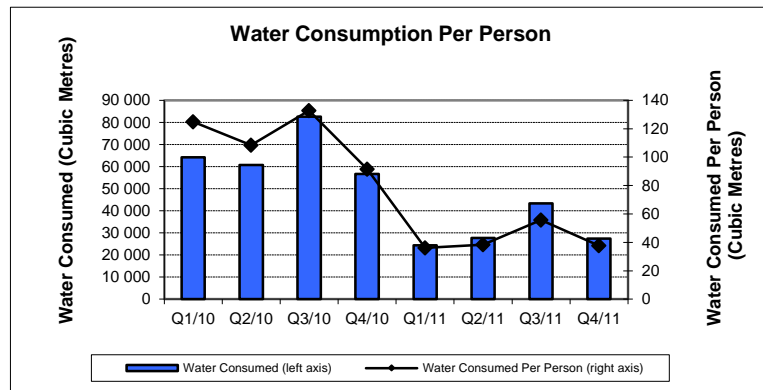
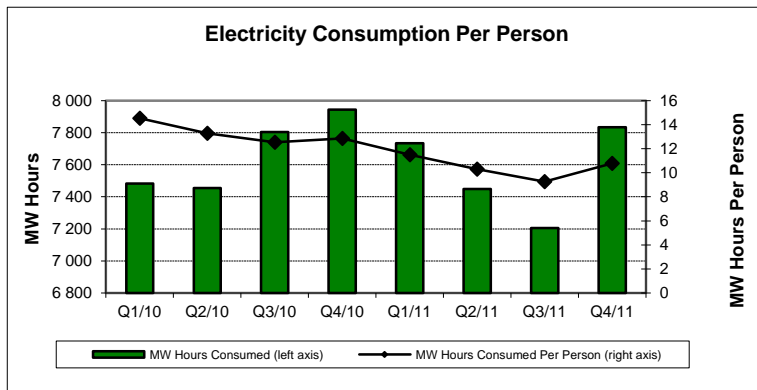
<b>Duration Rate (DR / DRIL)</b>	<p>Average number of Days Lost per (Fatal Injuries + Lost Time Injuries) OR Average number of Days Lost per (Fatal Illness + Lost Time Illness)</p> $DR = \frac{\text{Number of Days Lost in Time Period}}{(\text{Number of FIs} + \text{Number of LTIs in Time Period})}$ <p><i>(Currently not widely used in Sandvik, but occasionally requested by customers)</i></p>
<b>Restricted Duration Rate (RDR / RDIL)</b>	<p>Average number of (Days Lost + Restricted Work Days) per (Fatal Injury + Lost Time Injury + Restricted Work Injury) OR</p> <p>Average number of (Days Lost + Restricted Work Days) per (Fatal Illness + Lost Time Illness + Restricted Work Illness)</p> $RDR = \frac{(\text{Number of Days Lost} + \text{Number of Restricted Work Days}) \text{ in Time Period}}{(\text{Number of LTIs} + \text{Number of RWIs in Time Period})}$ <p><i>(Currently not widely used in Sandvik, but occasionally requested by customers)</i></p>



# “IN THE BEGINNING THERE WERE SPREADSHEETS.....”

And some Environmental data, with graphs

Quarterly Electricity Consumption			Quarterly Water Consumption					Quarterly Fossil Fuel Consumption By Vehicles/Mobile			
Electricity Consumption (MWh)	Electricity Consumed Per Person (MWh/Person)	CO2 from Electricity Consumed (Tonnes)	Water Purchased From Water Companies (Cubic Metres)	Ground Water Extracted by Sandvik (Cubic Metres)	Collected Lake/River Water (Cubic Metres)	Collected Rain Water (Cubic Metres)	Water Consumed Per Person (Cubic Metres Per Person)	Gasoline (Cubic Meters)	CO2 from Gasoline (Tonnes)	Diesel (Cubic Meters)	CO2 from Diesel (Tonnes)
7,482.00	15.60	35.91	64,277.00				134.00		0.00		
	0.00	0.00					0.00		0.00		
7,482.00	14.53	35.91	64,277.00	0.00	0.00	0.00	124.81	0.00	0.00	0.00	



“IN THE BEGINNING THERE WERE SPREADSHEETS.....”

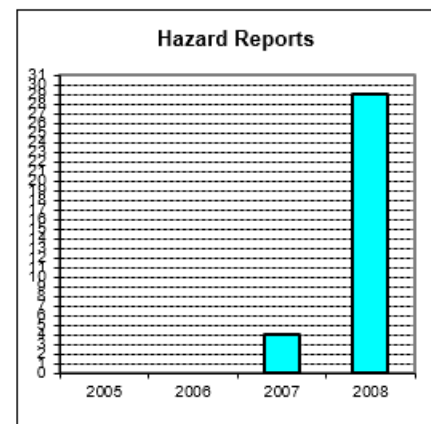
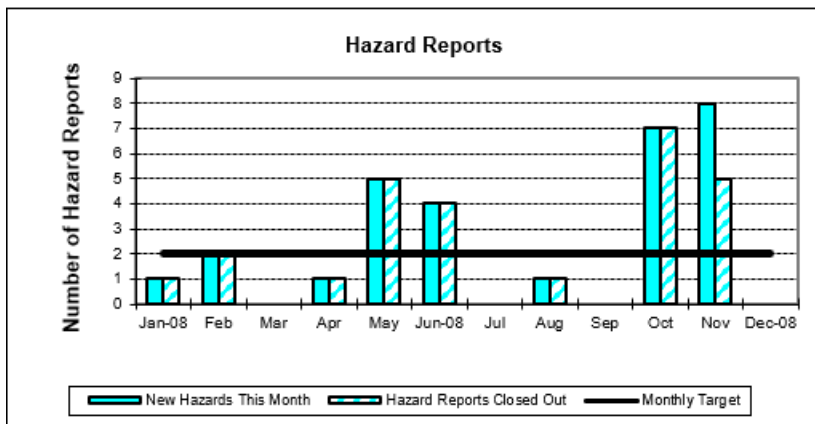
And even (what I call) a ‘semi- leading’ indicator - with graphs of course!!

New Hazard Reports	New Hazard Reports Closed Out	% Hazard Reports Closed Out
1	1	100.0%
		0.0%
1	1	100.0%

2	2	100.0%
		0.0%
2	2	100.0%

		0.0%
		0.0%
0	0	0.0%

1	1	100.0%
		0.0%
1	1	100.0%



# A QUICK DIGRESSION & DEFINITION BREAK

I like to compare the use of EHS indicators / KPIs to driving a car


- ❑ Only using Lagging Indicators e.g. LTIFR is like only looking at the rear-view mirror when driving your car – interesting to see what you’ve hit but .....
- ❑ Adding in the use of ‘Semi-Lagging’\* means that you’re now also looking out of the side windows of your car – better but still not ‘ideal’!?
- ❑ Using Leading Indicators is identifying the Threats and/or Opportunities that you can see in the direction you’re headed i.e. by looking through the front windscreen of your car, and changing your driving behaviour

























\* I call Hazard Reporting a Semi-Lagging indicator because the potential energy or item is already in the workplace (so not fully preventative / Leading) but no incident has occurred yet (so not Lagging)

# “IN THE BEGINNING THERE WERE SPREADSHEETS.....”

And lots of locations that needed to be rolled up into Regions, and .....

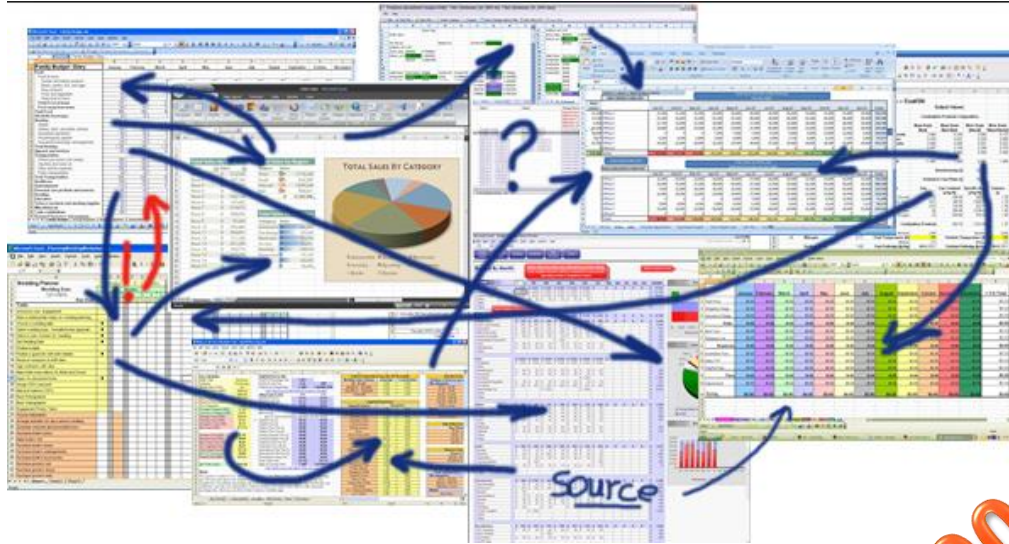
76 Excel  
workbooks



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# “WHAT GETS MEASURED, GETS DONE”

Spreadsheets pushed to their limits!!!



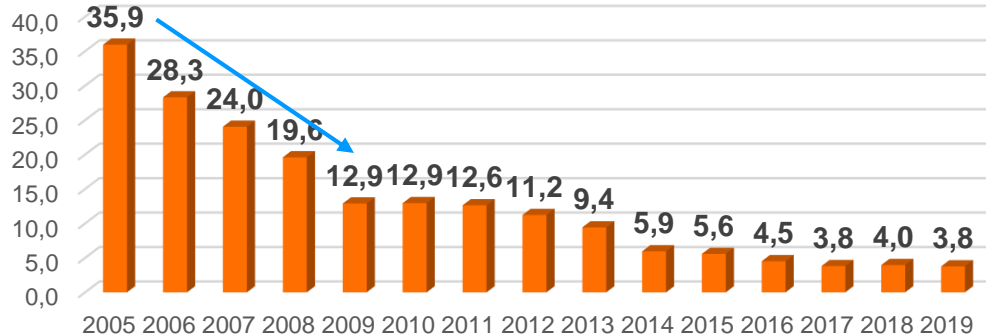
**>1,000,000 Calculations**  
**76 Interlinked**  
**Spreadsheets**

# SANDVIK'S USE OF EHS METRICS

Lagging Indicators & Spreadsheets were useful

## Sandvik Mining & Rock Technology TRIFR by Year

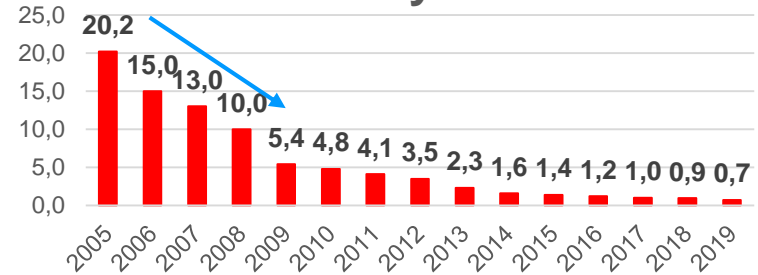
NF= 1,000,000



Spreadsheet  
Use starts

Total Recordable Injury (TRI) = LTI + RWI + MTI

## Sandvik Mining & Rock Technology LTIFR by Year



But maybe 'only when picking the low hanging fruit'?

And spreadsheets are labour intensive and 'error provocative'?



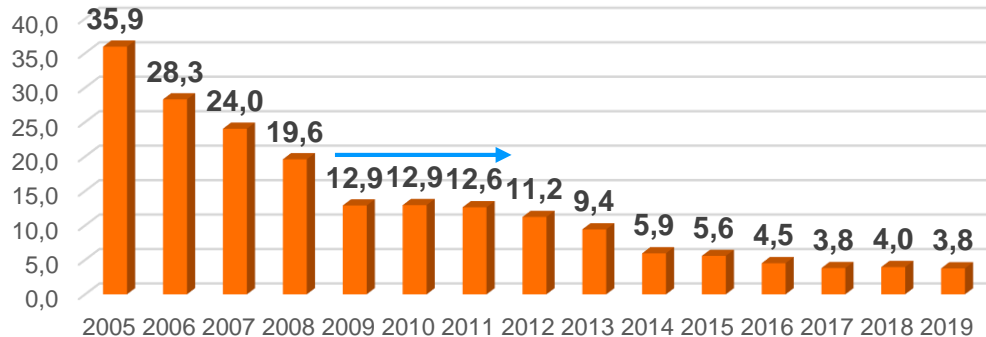
# SANDVIK'S USE OF EHS METRICS

But “the Plateau is coming”



## Sandvik Mining & Rock Technology TRIFR by Year

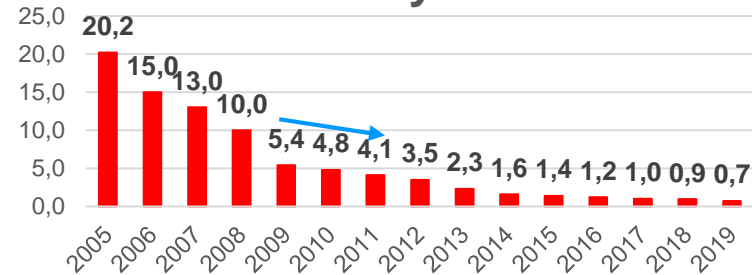
NF= 1,000,000



Transition to  
Database

Total Recordable Injury (TRI) = LTI + RWI + MTI

## Sandvik Mining & Rock Technology LTIFR by Year



Databases require different skills sets and can be hard work to set up but less labour intensive and ‘error provocative’ once in place.

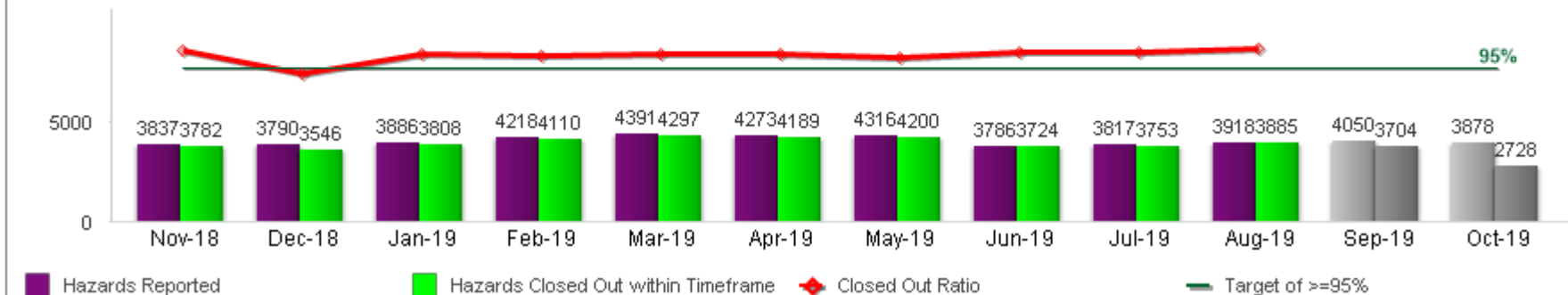
But if no accompanying difference in thinking / strategy, then all you end up with is a ‘better spreadsheet’!?



# HAZARDS – V – CLOSE OUT RATIO ( $\geq 95\%$ CLOSED OUT WITHIN 2 MONTHS AFTER THE MONTH IN WHICH IT OCCURRED)

Full Process Hazards Close Out Ratio ( $\geq 95\%$  Target)

Location : GLOBAL  
BA/BU/SA : MINING & ROCK TECHNOLOGY



Month Year	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19
Reported	3837	3790	3886	4218	4391	4273	4316	3786	3817	3918	4050	3878
Closed within Timeframe	3782	3546	3808	4110	4297	4189	4199	3724	3753	3885	3704	2728
Closed Outside Timeframe	49	235	78	92	83	75	77	43	42	4	0	0
Actual Closed	3831	3781	3886	4202	4380	4264	4276	3767	3795	3889	3704	2728
Within Timeframe Closed Ratio	98.6%	93.6%	98.0%	97.4%	97.9%	98.0%	97.3%	98.4%	98.3%	99.2%	91.5%	70.3%
Target	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
Current Closed Ratio	99.8%	99.8%	100.0%	99.6%	99.7%	99.8%	99.1%	99.5%	99.4%	99.3%	91.5%	70.3%

## Graph Notes:

- 1) The following months Nov 2018, Dec 2018, Jan 2019, Feb 2019, Mar 2019, Apr 2019, May 2019, Jun 2019, Jul 2019 and Aug 2019 should now be  $\geq 95\%$  Closed Out
- 2) The "greyed" columns on this graph indicate months that are not yet within the Closed Out Timeframe

# SANDVIK'S USE OF EHS METRICS

## Leading Indicators – started off simple

The first Leading Indicators we used were measuring the month on month Progress Towards Implementation of 'Priority Standards' from within our EHS Management System. Some examples are shown below

While introducing the concept started people thinking in a different way and achieved some changes in behaviour, it's fair to say the presentation was a 'little bit dull' / lacking motivation for change

EHS Std 6 (Communication & Involvement) Compliance As At																							
Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
75%	75%	75%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

EHS Std 7 (Accountability & Responsibility) Compliance As At																							
Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
50%	50%	75%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

EHS Std 22 (Performance Monitoring) Compliance As At																							
Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

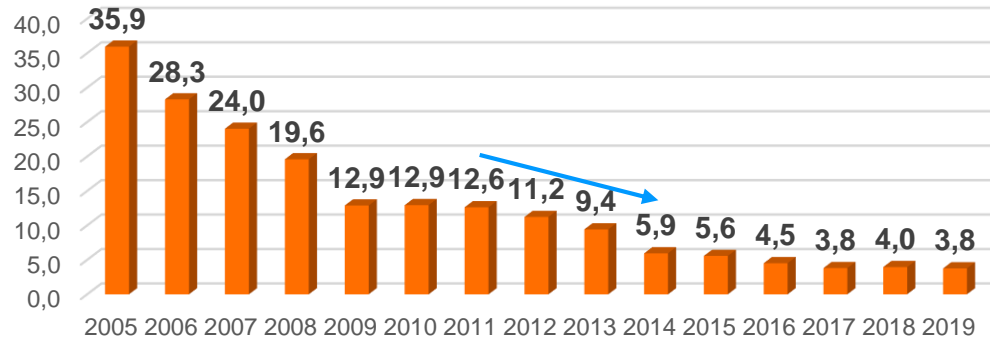
MHS Safe Use of Vehicles Compliance At																							
Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
15%	25%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	100%	100%

# SANDVIK'S USE OF EHS METRICS

After the Winter, comes the Spring ....

## Sandvik Mining & Rock Technology TRIFR by Year

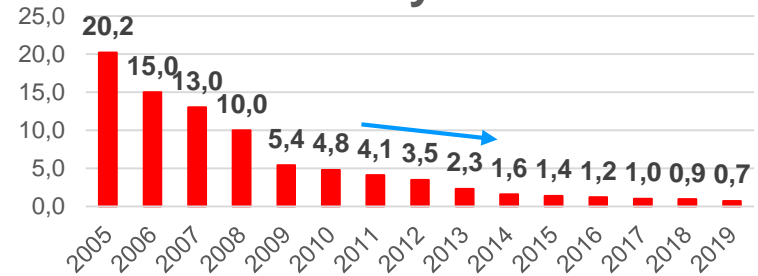
NF= 1,000,000



Addition of Leading Indicators

Total Recordable Injury (TRI) = LTI + RWI + MTI

## Sandvik Mining & Rock Technology LTIFR by Year



The difference in thinking / strategy, was to introduce Leading Indicators into the KPI set



# WHAT WAS NEEDED FOR THIS NEXT STEP?

- ❑ A new way of using Leading Indicators to help achieve our ambitions
  - ❑ Turning ‘wanted behaviours’:
    - ❑ into processes, and then
    - ❑ into numbers (an Indicator) that can tell a story that inspires positive culture change
- ❑ Finding an ‘interesting’ way of presenting the information
- ❑ Ability to handle very large amounts of data and variety of processes in an ever decreasing time frame each month

# CURRENT FACTORS EXPLAINED

Factor 7

Investigation  
Process



- Incident Process Flow completed within timeframe.
- Investigation carried out within Timeframe
- Copy of Investigation Findings uploaded to database

## Incident Reporting Process (Timeline)



**Supervisor Assessment**  
completed within timeframe

≤ 7 days from Incident  
Date



**Manager Review**  
Completed within  
Timeframe

≤ 10 days from Incident  
Date



**Investigation** Completed  
within timeframe

≤ 21 Days from Incident  
Date



**Investigation** Completed  
within Timeframe + Copy  
uploaded to Database

≤ 21 Days from Incident  
Date

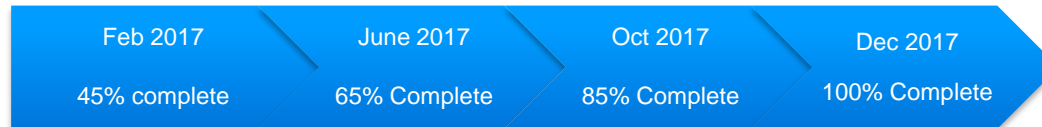
# CURRENT FACTORS EXPLAINED

Factor 5

EHS Plan %  
Completion



- Month by Month monitoring of EHS Plan progress



EHS Plan completion is the Primary EHS KPI for all units in SMRT

# CURRENT FACTORS EXPLAINED

Factor 3

Reporting  
Ratio



- 12MMA and Normalised
- 3 Ratios applied
  - MIs + MTIs : LTIs + RWIs
  - Closed Near Misses : LTIs + RWIs
  - Full Process Hazards : LTIs + RWIs
- Ratio score then applied to workplace specific Scoring Matrix (Modified Bird's Pyramid theory measurement)

Sales Areas



PUs & ACs



Logistics  
Warehouses



Service Centres



Consolidated  
Top Level

Average  
values  
'Rolled-Up'

Scoring based on Workplace Risk Profile

# CURRENT FACTORS EXPLAINED

## Factor 6

### EHS Leadership Behaviours (ELBs)



- ELBs entered into database by Managers & Supervisors ELBs reviewed for quality and compliance
- ELB progress updated Quarterly by Managers & Supervisors
- ELB progress reviewed Quarterly

Q1



Supervisors & Managers

ELBs Declared  
& Entered

EHS Manager

ELBs Reviewed  
for Quality &  
Compliance

Q2,3 & 4



Supervisors & Managers

ELB Progress  
Confirmed  
Examples Provided

EHS Manager

ELB Progress  
Reviewed

**SANDVIK**

# EHS LEAGUE TABLES

## An early version

Weighting Effect				10% (- or +)	15% (+)	10% (+)	30% (+)	15% (+)	20% (+)			
Feb 2018 Consolidated PA/SA	Manager	Fatality Rating	TRIFR 12MMA Rating	Reporting Ratio	Hazard Closed FR & Level Ratio	% EHS Plan Completion Score	EHS Leadership Behaviours	Investigation Process Score	Total Score	Rank		Rank Previous Month
SMRT -		N/A	10	10.0	7	7.4	1	15.8	51.2	1	↑	3
SMRT -		N/A	8	6.0	10	7.4	4	12.4	47.8	2	↓	1
SMRT -		N/A	8	10.3	12	4.8	1	9.1	45.2	3	↑	4
SMRT -		N/A	10	11.5	7	6.7	0	8.4	43.6	4	↑	6
SMRT -		N/A	10	9.0	5	7.6	0	11.2	42.9	5	↓	2
SMRT -		N/A	10	2.7	12	4.0	5	9.0	42.7	6	↓	5
SMRT -		N/A	6	5.0	2	9.9	0	17.2	40.1	7	↑	9
SMRT -		N/A	10	6.7	2	8.6	0	12.1	39.4	8	↓	7
SMRT -		N/A	6	6.2	9	7.1	0	10.1	38.4	9	↓	8
SMRT -		N/A	8	0.5	1	3.7	5	4.0	22.2	10	●	10

Current areas where we want improvement and the relative weighting assigned to them

Explaining the progress in each of these areas gives a far better view of both EHS Culture and Systems development in each of Product or Sales Areas

“What gets measured, and talked about, gets done and changes things”

# EHS LEAGUE TABLES

Learning from each other for continuous improvement

## Weighting Effect

Feb 2018 Consolidated PA/SA				10% (- or +)	15% (+)	10% (+)	30% (+)	15% (+)	20% (+)	Total Score	Rank	Rank Previous Month
Manager		Fatality Rating	TRIFR 12MMA Rating	Reporting Ratio	Hazard Closed FR & Level Ratio	EHS Plan Completion Score	EHS Leadership Behaviours	Investigation Process Score				
SMRT -		N/A	10	10.0	7	7.4	1	15.8	51.2	1	↑	3
SMRT -		N/A	8	6.0	10	7.4	4	12.4	47.8	2	↓	1
SMRT -		N/A	8	10.3	12	4.8	1	9.1	45.2	3	↑	4
SMRT -		N/A	10	11.5	7	6.7	0	8.4	43.6	4	↑	6
SMRT -		N/A	10	9.0	5	7.6	0	11.2	42.9	5	↓	2
SMRT -		N/A	10	2.7	12	4.0	5	9.0	42.7	6	↓	5
SMRT -		N/A	6	5.0	2	9.9	0	17.2	40.1	7	↑	9
SMRT -		N/A	10	6.7	2	8.6	0	12.1	39.4	8	↓	7
SMRT -		N/A	6	6.2	9	7.1	0	10.1	38.4	9	↓	8
SMRT -		N/A	8	0.5	1	3.7	5	4.0	22.2	10	●	10

Easy to see who is doing well in each area – provides opportunity for “sharing & learning”

“What gets measured and talked about, gets done and changes things”

# EHS LEAGUE TABLES

And nobody wants to be at the bottom of any comparison

Weighting Effect			10% (- or +)	15% (+)	10% (+)	30% (+)	15% (+)	20% (+)				
Feb 2018 Consolidated PA/SA	Manager	Fatality Rating	TRIFR 12MMA Rating	Reporting Ratio	Hazard Closed FR & Level Ratio	% EHS Plan Completion Score	EHS Leadership Behaviours	Investigation Process Score	Total Score	Rank		Rank Previous Month
SMRT -		N/A	10	10.0	7	7.4	1	15.8	51.2	1	↑	3
SMRT -		N/A	8	6.0	10	7.4	4	12.4	47.8	2	↓	1
SMRT -		N/A	8	10.3	12	4.8	1	9.1	45.2	3	↑	4
SMRT -		N/A	10	11.5	7	6.7	0	8.4	43.6	4	↑	6
SMRT -		N/A	10	9.0	5	7.6	0	11.2	42.9	5	↓	2
SMRT -		N/A	10	2.7	12	4.0	5	9.0	42.7	6	↓	5
SMRT -		N/A	6	5.0	2	9.9	0	17.2	40.1	7	↑	9
SMRT -		N/A	10	6.7	2	8.6	0	12.1	39.4	8	↓	7
SMRT -		N/A	6	6.2	9	7.1	0	10.1	38.4	9	↓	8
SMRT -		N/A	8	0.5	1	3.7	5	4.0	22.2	10	●	10







And just a little bit of 'healthy competition helps too!!

“What gets measured and talked about, gets done and changes things”



# EHS LEAGUE TABLES

## The current version

Weighting Effect		20% (+)	15% (+)	10% (+)	20% (+)	15% (+)	20% (+)			
Oct 2019 Division	Manager	Fatality Prevention (CCM) Rating	Reporting Ratio	Environmental Hazard Management	% EHS Plan Completion	EHS Leadership Behaviour	Investigation Process	Total Score	Rank	Rank Previous Month
SMRT - Division 1	Manager 1	19.0	14.0	7.0	18.6	13.5	16.1	88.2	1	 1
SMRT - Division 3	Manager 3	18.0	15.0	7.0	18.5	13.5	14.3	86.3	2	 2
SMRT - Division 7	Manager 7	16.1	14.7	7.3	17.5	12.7	16.4	84.6	3	 3
SMRT - Division 9	Manager 9	17.0	13.7	7.5	16.8	13.5	15.7	84.2	4	 5
SMRT - Division 8	Manager 8	18.0	14.0	7.0	17.6	12.4	15.2	84.2	5	 4
SMRT - Division 2	Manager 2	17.6	12.3	7.7	17.8	12.8	15.7	83.9	6	 6
SMRT - Division 4	Manager 4	17.3	14.7	7.5	17.7	11.8	12.9	81.8	7	 7
SMRT - Division 5	Manager 5	17.4	12.3	8.6	17.9	12.1	13.3	81.6	8	 9
SMRT - Division 6	Manager 6	18.0	12.3	7.0	16.7	11.3	15.0	80.3	9	 8

“What gets measured and talked about, gets done and changes things”

# EHS LEAGUE TABLES

## EHS League Table: Sales Area Level

Weighting Effect	20% (+)	15% (+)	10% (+)	20% (+)	15% (+)	20% (+)			
Oct 2019 Sales Area	Fatality Prevention (CCM) Rating	Reporting Ratio	Environmental Hazard Management	% EHS Plan Completion	EHS Leadership Behaviour	Investigation Process	Total Score	Rank	Previous Month
SMART - Sales Area 1	19.0	15.0	8.0	18.3	13.5	18.9	92.7	1	88.3
SMART - Sales Area 2	19.0	15.0	8.0	17.2	13.5	18.6	91.4	2	84.8
SMART - Sales Area 3	19.0	15.0	8.0	18.0	13.5	17.8	91.3	3	85.2
SMART - Sales Area 9	19.0	15.0	7.0	18.9	13.5	15.8	89.2	4	83.6
SMART - Sales Area 5	18.0	15.0	8.0	16.4	13.5	15.0	85.9	5	80.0
SMART - Sales Area 10	16.0	14.0	7.0	18.0	13.5	14.1	82.6	6	75.1
SMART - Sales Area 13	14.0	14.0	7.0	18.0	11.3	18.0	82.2	7	79.4
SMART - Sales Area 12	18.0	9.0	8.0	18.8	13.5	14.5	81.8	8	75.1
SMART - Sales Area 7	18.0	15.0	7.0	18.5	13.5	9.7	81.6	9	74.8
SMART - Sales Area 4	17.0	13.0	8.0	17.2	11.3	13.6	80.0	10	70.5
SMART - Sales Area 8	18.0	13.0	7.0	17.4	11.3	12.9	79.6	11	76.8
SMART - Sales Area 6	16.0	14.0	8.0	16.9	11.3	11.5	77.7	12	71.1
SMART - Sales Area 11	18.0	10.0	7.0	16.6	11.3	13.5	76.4	13	71.9

## EHS League Table: PU/AC Level

Weighting Effect	20% (+)	15% (+)	10% (+)	20% (+)	15% (+)	20% (+)			
Oct 2019 PU/AC Location >=25 Workers	Fatality Prevention (CCM) Rating	Reporting Ratio	Environmental Hazard Management	% EHS Plan Completion	EHS Leadership Behaviour	Investigation Process	Total Score	Rank	Previous Month
PU No. 1	18.0	15.0	7.0	18.6	13.5	18.2	91.3	1	81.3
PU No. 2	18.0	15.0	7.0	18.6	13.5	17.7	89.8	2	84.8
PU No. 13	16.0	13.0	7.0	18.9	13.5	18.8	87.2	3	81.3
PU No. 15	18.0	12.0	8.0	16.9	13.5	18.3	86.7	4	81.3
PU No. 8	18.0	13.0	8.0	17.0	13.5	16.6	86.0	5	81.3
PU No. 19	19.0	14.0	8.0	17.1	11.3	15.8	85.2	6	81.3
PU No. 9	19.0	15.0	7.0	16.9	13.5	15.8	84.9	7	81.3
PU No. 14	19.0	13.0	8.0	16.9	13.5	13.3	83.7	8	81.3
PU No. 18	14.0	15.0	7.0	17.7	11.3	18.5	83.4	9	81.3
PU/AC No. 3	17.0	15.0	7.0	18.3	11.3	14.6	83.1	10	81.3
PU No. 10	17.0	15.0	7.0	18.8	13.5	11.3	82.6	11	81.3
PU/AC No. 6	19.0	14.0	7.0	15.8	13.5	12.6	81.9	12	81.3
PU No. 16	17.0	15.0	7.0	17.1	11.3	13.9	81.2	13	81.3
PU No. 11	14.0	12.0	7.0	19.5	13.5	14.7	80.7	14	81.3
PU No. 7	16.0	13.0	7.0	18.1	13.5	13.0	80.6	15	81.3
PU No. 5	18.0	7.0	8.0	17.6	13.5	16.3	80.4	16	81.3
PU No. 20	12.0	15.0	7.0	19.3	11.3	15.9	80.4	17	81.3
PU No. 17	16.0	15.0	7.0	17.6	13.5	10.4	79.5	18	81.3
PU No. 21	16.0	13.0	7.0	15.8	11.3	15.0	78.1	19	81.3
PU No. 4	14.0	15.0	7.0	18.1	11.3	12.5	77.8	20	81.3
PU No. 12	12.0	15.0	7.0	17.4	11.3	11.4	74.0	21	81.3

A good technology solution (SAI EHS360) helps us produce the data for each major location within a few days of each month end

## EHS League Table: Logistics Level

Weighting Effect	20% (+)	15% (+)	10% (+)	20% (+)	15% (+)	20% (+)			
Oct 2019 Logistics Warehouse Location >=10 Workers	Fatality Prevention (CCM) Rating	Reporting Ratio	Environmental Hazard Management	% EHS Plan Completion	EHS Leadership Behaviour	Investigation Process	Total Score	Rank	Previous Month
Warehouse 1	17.0	15.0	10.0	17.1	11.3	20.0	90.4	1	88.3
Warehouse 5	18.0	15.0	10.0	18.3	11.3	16.7	89.3	2	84.8
Warehouse 8	17.0	15.0	10.0	18.2	13.5	15.0	88.7	3	81.3
Warehouse 4	18.0	12.0	10.0	17.9	13.5	14.3	85.7	4	81.3
Warehouse 6	19.0	15.0	10.0	19.4	11.3	8.6	83.2	5	81.3
Warehouse 9	18.0	10.0	10.0	18.9	11.3	5.0	73.2	6	81.3
Warehouse 2	18.0	5.0	10.0	18.0	11.3	-	62.3	7	81.3
Warehouse 7	16.0	5.0	6.0	17.7	13.5	-	58.2	8	81.3
Warehouse 3	12.0	10.0	7.0	19.5	7.5	0.0	56.0	9	81.3

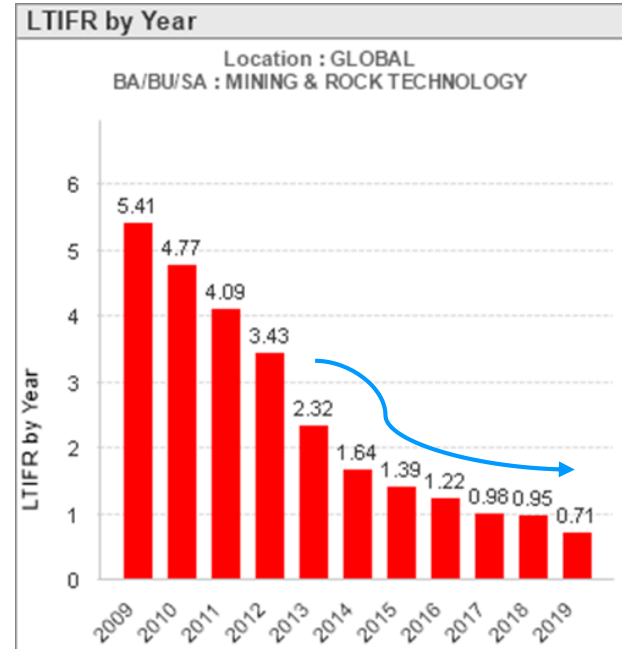
## EHS League Table: Service Centre Level

Weighting Effect	20% (+)	15% (+)	10% (+)	20% (+)	15% (+)	20% (+)			
Oct 2019 SMART Service Centre Major Location >=25 Workers	Fatality Prevention (CCM) Rating	Reporting Ratio	Environmental Hazard Management	% EHS Plan Completion	EHS Leadership Behaviour	Investigation Process	Total Score	Rank	Previous Month
Service Centre 1	18.0	15.0	8.0	18.8	13.5	16.6	90.0	1	81.3
Service Centre 4	19.0	15.0	8.0	19.0	13.5	15.4	89.9	2	81.3
Service Centre 7	17.0	15.0	8.0	18.5	11.3	16.4	86.1	3	81.3
Service Centre 13	17.0	13.0	8.0	18.5	11.3	16.2	83.9	4	81.3
Service Centre 5	17.0	15.0	8.0	18.5	11.3	12.2	82.8	5	81.3
Service Centre 10	18.0	7.0	8.0	18.8	13.5	15.5	80.8	6	81.3
Service Centre 3	18.0	11.0	7.0	18.7	13.5	11.8	80.0	7	81.3
Service Centre 14	17.0	15.0	7.0	18.5	13.5	8.2	79.2	8	81.3
Service Centre 12	18.0	10.0	8.0	19.1	13.5	10.6	79.2	9	81.3
Service Centre 2	16.0	10.0	8.0	17.6	11.3	12.3	75.1	10	81.3
Service Centre 11	17.0	6.0	8.0	19.6	11.3	8.8	70.6	11	81.3
Service Centre 8	16.0	9.0	7.0	17.0	13.5	5.3	67.8	12	81.3
Service Centre 15	12.0	11.0	5.0	17.1	7.5	13.6	66.2	13	81.3
Service Centre 16	17.0	10.0	8.0	18.5	11.3	0.0	64.7	14	81.3
Service Centre 9	-	15.0	-	16.4	-	14.0	45.4	15	81.3
Service Centre 5	-	15.0	-	17.6	-	12.3	44.9	16	81.3

“What gets measured and talked about, gets done and changes things”

# SANDVIK'S USE OF EHS METRICS

So, are Leading Indicators and the League Tables helping? .....



In the last Sandvik Employee Survey,  
88% of employees rated the EHS Culture as either 'Strong' or 'Very Strong'





<h2>WE BUILD CIRCULARITY</h2> <div> <p>More than 90% circular</p> </div> <p>We will drive the shift to more circular business models and use of resources, finding ways to close loops and generate new revenue streams from the processes and materials we use.</p>	<h2>WE SHIFT CLIMATE</h2> <div> <p>Halve the CO<sub>2</sub> impact</p> </div> <p>We will deliver on our commitments to reduce impact on the climate. We are aiming to shift mindsets and outcomes in our own business, for our customers and with our suppliers to help reach our targets.</p>	<h2>WE CHAMPION PEOPLE</h2> <div> <p>Zero harm to people</p> </div> <p>We aspire to the highest standards for people and we will keep stepping these standards up higher and higher. Our goal is Zero Harm.</p>	<h2>WE PLAY FAIR</h2> <div> <p>Always do the right thing</p> </div> <p>We will constantly aim higher in ethics and transparency, being a leader in playing fair and being open.</p>
<p><b>CUSTOMERS</b></p> <ul style="list-style-type: none"> <li>Material and resource efficiency improvement part of all development projects</li> <li>Develop business models for recycling/circularity for our customers</li> </ul> <p><b>OPERATIONS</b></p> <ul style="list-style-type: none"> <li>Our products including packaging material shall have at least 90% material circularity</li> <li>Halve waste in our production processes</li> </ul>	<ul style="list-style-type: none"> <li>CO<sub>2</sub> improvement part of all product development projects</li> <li>Value proposition to our customers shall always include verified CO<sub>2</sub> reduction potential</li> <li>Halve the CO<sub>2</sub> foot print from our own production</li> <li>Halve the CO<sub>2</sub> foot print for transportation of people and products</li> </ul>	<ul style="list-style-type: none"> <li>Health &amp; Safety improvements part of all product development projects</li> <li>Health &amp; Safety/risk analyses with all products and services</li> <li>Halve Total Recorded Injury Frequency Rate (TRIFR) and occupational illnesses</li> <li>All Sandvik employees to be offered health and well-being programs</li> </ul>	<ul style="list-style-type: none"> <li>Know Your Customer (KYC) process leading to active, sustainable choices</li> <li>Increased transparency on sustainability targets and results</li> <li>Proactive and agile Compliance system fully embedded in business operations</li> <li>Diverse and inclusive workforce with at least one third female managers</li> <li>Everyone engaged in community involvement with a significant positive impact on society</li> </ul>
<p><b>SUPPLIERS</b></p> <ul style="list-style-type: none"> <li>Require 90% circularity for key suppliers</li> </ul>	<ul style="list-style-type: none"> <li>Require halving of CO<sub>2</sub> foot print from our key suppliers</li> </ul>	<ul style="list-style-type: none"> <li>Require health &amp; safety improvements plan to reach Sandvik standards from key suppliers</li> </ul>	<ul style="list-style-type: none"> <li>All suppliers compliant with Sandvik Supplier Code of Conduct</li> </ul>

## OUR ENABLERS

How we'll drive the change

### PERFORMANCE MANAGEMENT

Integrated within performance management systems and part of the incentive program for top managers

### IDEAS HUB

Create sustainability idea program with 100,000 sustainability ideas or innovations proposed by 2030

### THE SHIFT CHAMPIONS

Sustainable business partner award implemented (like Wilhelm Haglund Medal)

### GOOD GOVERNANCE

Well functioning and efficient governance, through The Sandvik Way and the Sandvik Code of Conduct

### TRANSPARENCY

We will drive change through transparency of our progress, learnings and ways of working



# THANK YOU!

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