



# MHSC – Winches and Accessories

*Sibanye-Stillwater Winch Signalling Journey*

September 2020

In our quest for continuous safety improvement, an incident prompted an investigation into winch related incidents...

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- Sibanye-Stillwater's SA Region experienced two winch related fatalities in 2018
- In both cases, while difficult to determine the exact root cause, it was hypothesized that winch signalling systems may have prevented the injuries
  - In SA Gold incident, some circumstances surrounding the incident may suggest alternate causes
  - In SA PGM, there were other extenuating circumstances that contributed to the incident
- Sibanye-Stillwater initiated a process aimed at determining major causes of winch related issues in an attempt to focus efforts on safety interventions
  - Following the success of SA Gold's RBE improvement process
- Concurrently, an investigation into a suitable winch signalling system was initiated

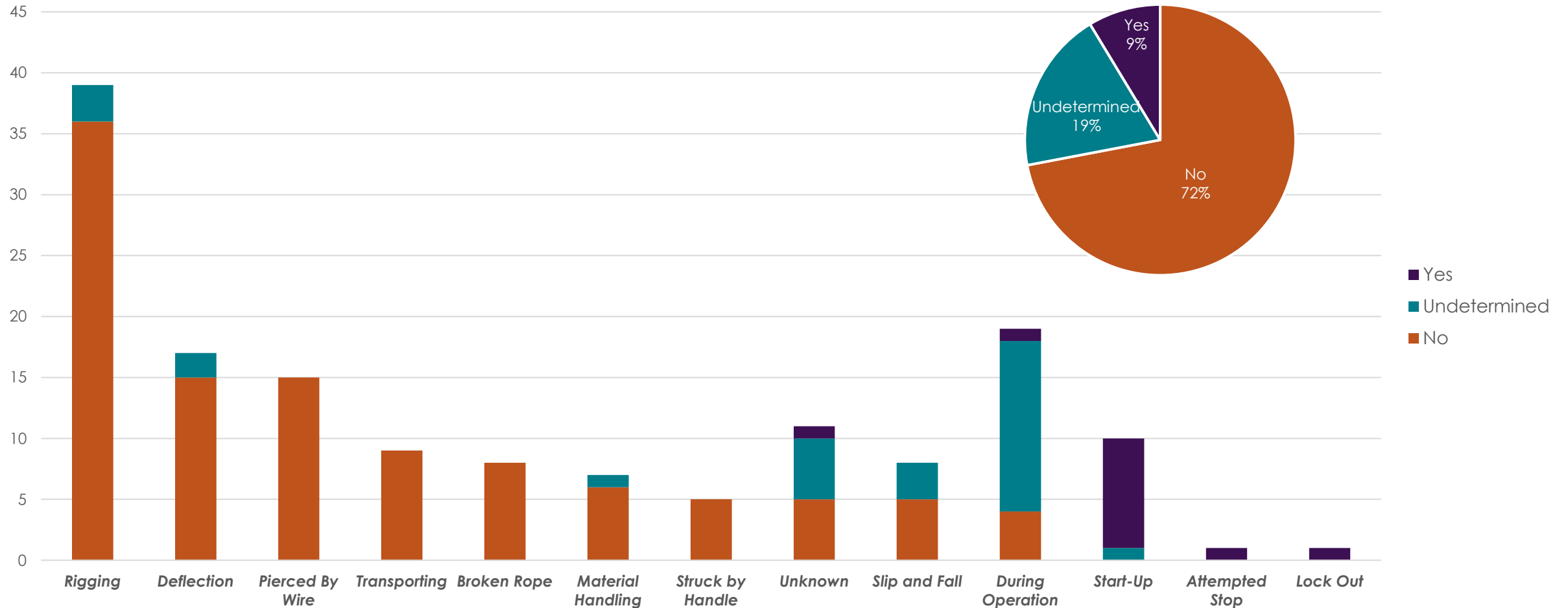


## Understanding cause

*Creating high impact change through focused interventions*

September 2020

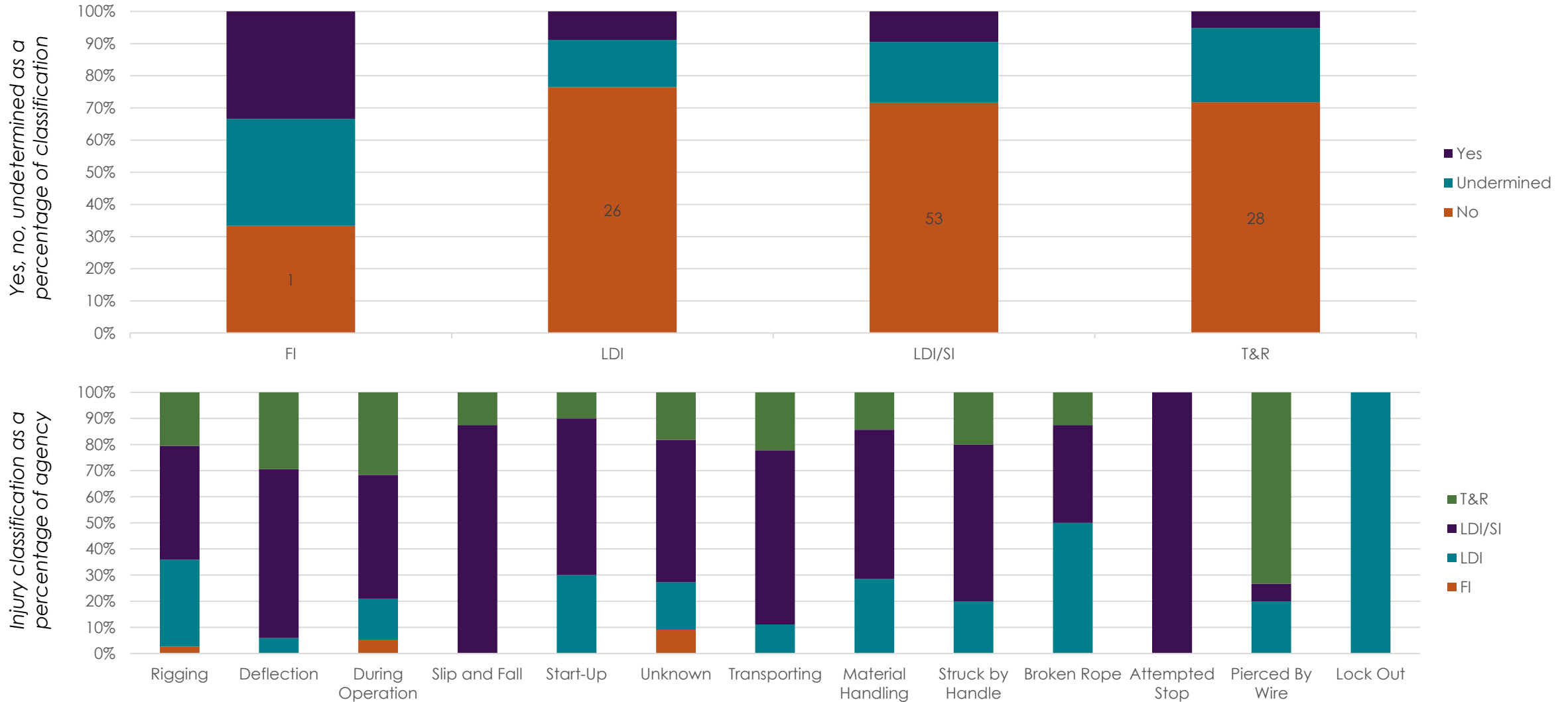
Before committing resources to a significant and complicated initiative, we thought it best to understand major causes and focus resources...



**Data includes 150 incidents from SA Gold**

Analysis shows that the majority of winch related incidents are as a result of secondary agencies

Between no, undetermined and yes, there seems to be no difference between the potential injury type...



Data shows that

We have made a number of observations on our operational data which will inform our focus on safety improvements...

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- A large majority of winch related injuries are as a result of secondary operations as opposed to the actual operation
- In terms of injury classification, both signalling and non-signalling related issues, as well as operating and non-operating agencies, there is similarity in the potential impact of the hazard
- In combination, it is important to consider the net impact of a specific initiative in conjunction with the complexity and other implications thereof



# Winch signalling systems

*Investigating potential solutions*

September 2020



While we assess options to solve broader issues, we are investigating winch signalling systems as a technology solution...

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- Three potential solutions have been identified that aim to solve issues related to winch operation and signalling that may address
- We have aligned our testing protocol with regulations pertaining to winches and rigging, as well as, are considering additional functionality that may add other benefits
- Key to the investigation is understanding the failure modes, reliability and maintenance requirements and limits in order to assess the potential impact of an implementation program based on the sheer scale of the operation
- Once we have determined the applicability and success of a suitable candidate, implementation may be considered but will be based primarily on risk profiles



We have standardised test reporting to ensure fairness in the investigation process...



| Functionality  | Weighting | Option 1 | Option 2 | Option 3 |
|--|-----------|----------|----------|----------|
| <b>Primary</b>   |           |          |          |          |
| Reg. 8.4(1).a - Prevent any person coming into contact with any moving part of a scraper winch or mono-rope winch installation or any equipment attached | 15.0%     |          |          |          |
| Reg. 8.4(2).a - scraper-winch and mono-rope winches are only operated by competent persons authorized by the employer to do so                           | 15.0%     |          |          |          |
| Reg. 8.4.(2).c - means are provided to forewarn persons of the intention to commence operating any scraper-winch or mono-rope winch                      | 15.0%     |          |          |          |
| Reg. 8.4(2).d - means are provided for persons to signal to the operator, from any access point to the installation                                      | 15.0%     |          |          |          |
| <b>Reliability</b>   |           |          |          |          |
| Number of Callouts Per Winch   | 20.0%     |          |          |          |
| <b>Secondary</b>   |           |          |          |          |
| Data Logging   | 10.0%     |          |          |          |
| Dynamic Weight Pad   | 5.0%      |          |          |          |
| Other Functionality  | 5.0%      |          |          |          |

- Our analysis shows that winches and rigging present a complex set of risks associated with both the operations of winches as well as secondary processes
- In order to drive effective interventions, we are following a risk based approach based on analysis of our current issues
- While technology is an option for certain issues, we have identified a number of areas where process based interventions are required
- We have seen extreme value in ground up interventions that cater for people and process
- Where necessary we are seeking technological interventions that may add value from a safety perspective



**End**

*Thank You*  
September 2020