Multi-disciplinary Technical Expert Project Meeting: Industry Alignment on TMM Regulations Implementation

RTIMS-MC (2022-23)
PROJECT (WP 1.5) FEEDBACK

Braam Greeff, Project Lead

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science & innovation
Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA

CSIR
Touching lives through innovation

MINERALS COUNCIL
SOUTH AFRICA

MANDELA MINING PRECINCT
MINDS FOR MINES

1. Project progress reporting
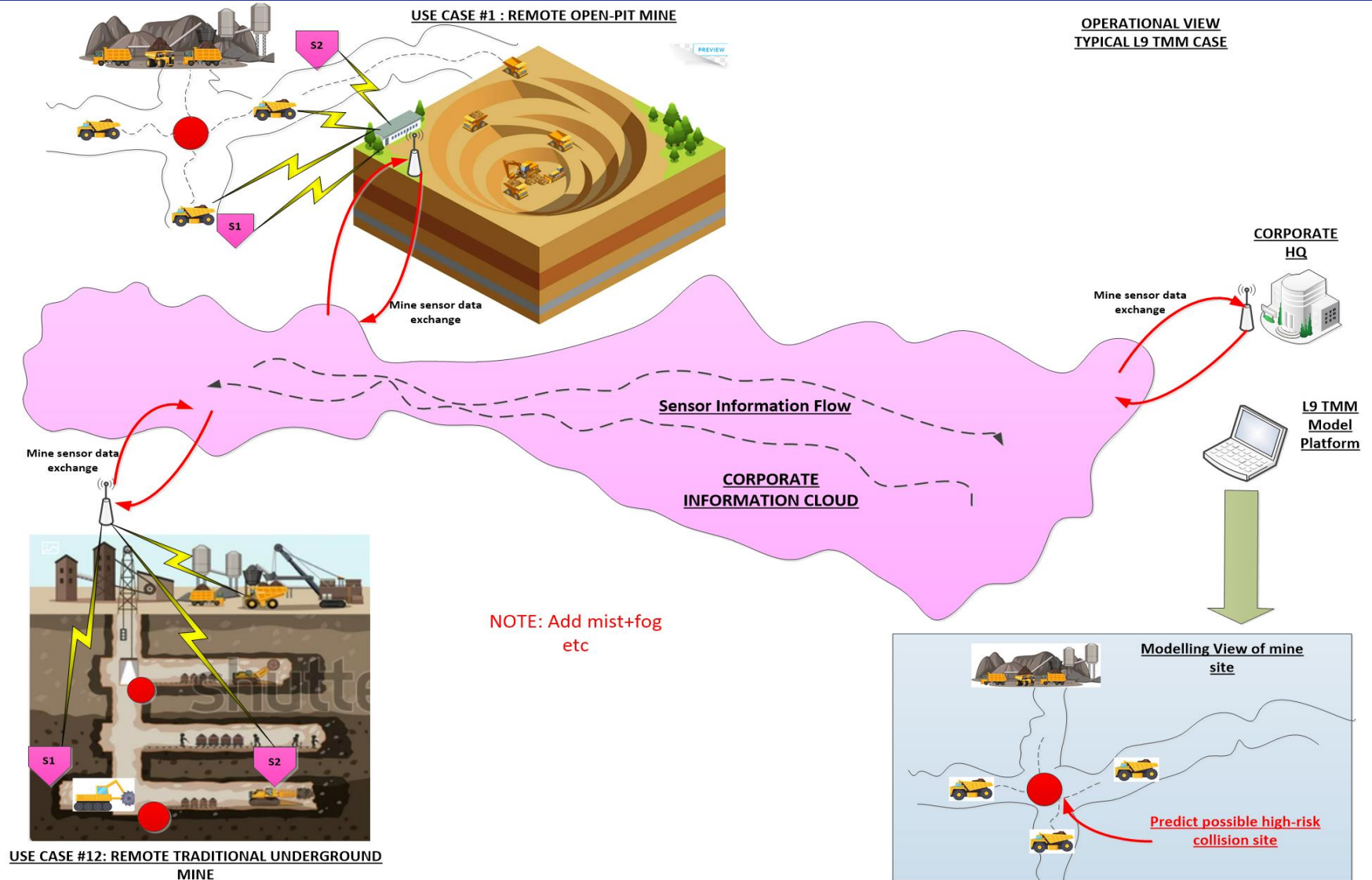2. Architectural solution concept(s)

Objective of the project: The aim of this RTIMS WP1.5(2) research project shall be to define the integrated system data-stack for the RTIMS, TMM intervention research project (Phase 2)
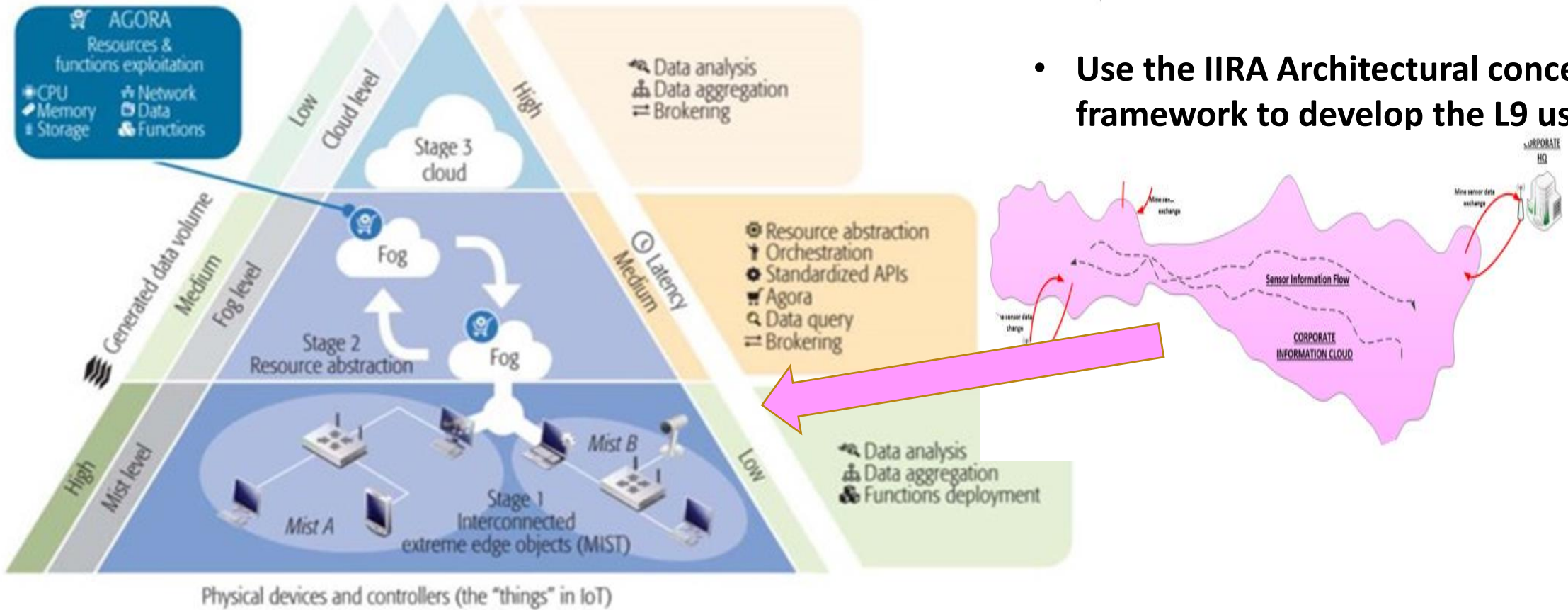
- **The focus is to define the information flow requirements to implement a scenario where the L9 model platform can receive real-world data as it is generated at a mining operation site.**

OPERATIONAL VIEW
TYPICAL L9 TMM CASE

USE CASE #1 : REMOTE OPEN-PIT MINE

Mine sensor data exchange

CORPORATE HQ

Mine sensor data exchange

Sensor Information Flow

CORPORATE INFORMATION CLOUD

L9 TMM Model Platform

Mine sensor data exchange

NOTE: Add mist+fog etc

USE CASE #12: REMOTE TRADITIONAL UNDERGROUND MINE

Modelling View of mine site

Predict possible high-risk collision site

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- **Use the IIRA Architectural concept as framework to develop the L9 use-case**

Figure. 1. Hierarchical architecture based on mist, fog, and cloud levels. http://www.zeitgeistlab.ca/doc/context_and_self_awareness_in_fog_and_mist_computing.html

(Source: IIRA and zeitgeislab)

USE-CASE CONCEPT ARCHITECTURE: TMM L9
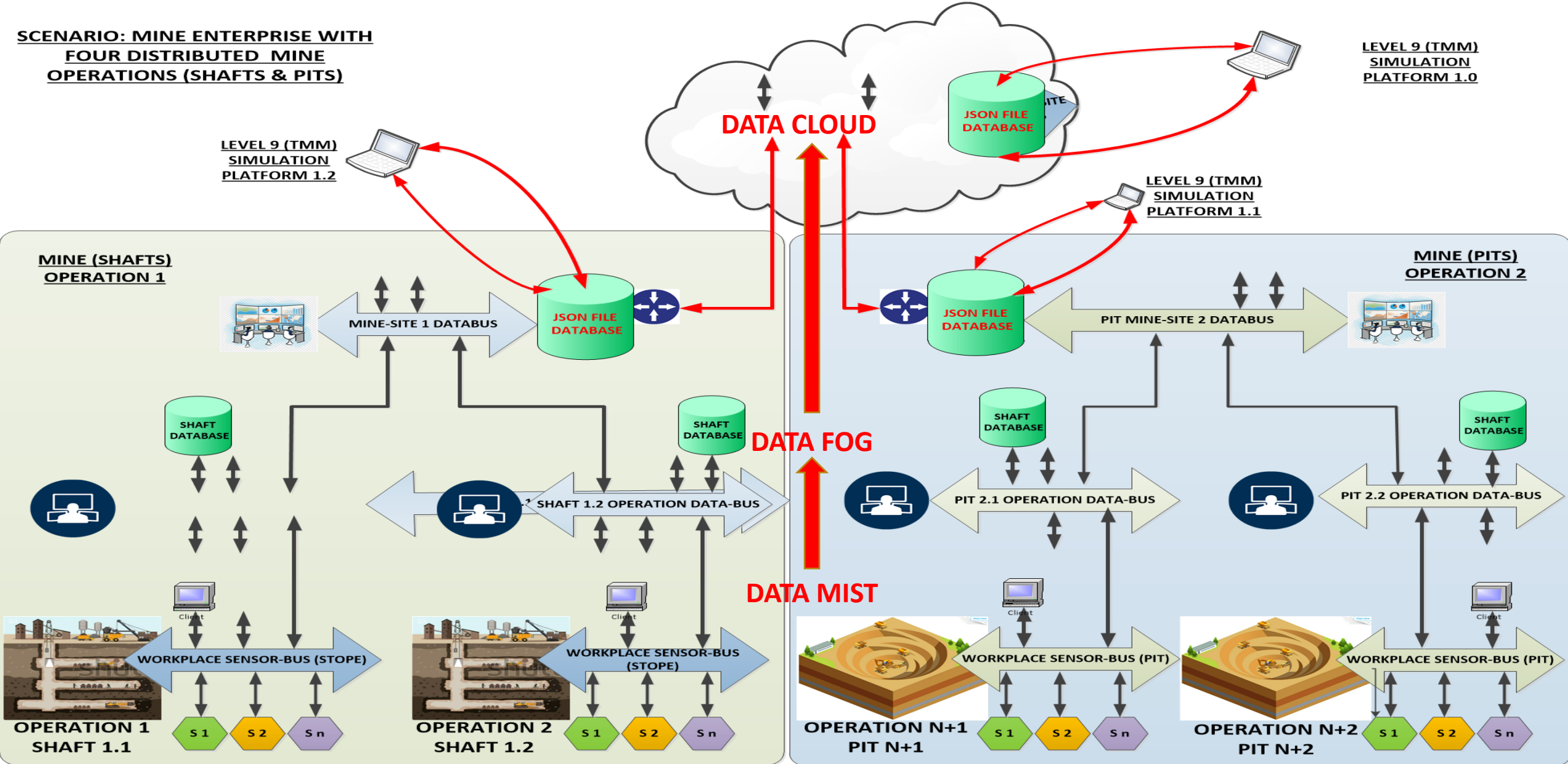
MANDELA MINING PRECINCT

- **Typical test scenario is envisioned with the L9 TMM modeling platform receiving real-world data from a mining operation in near-real time**
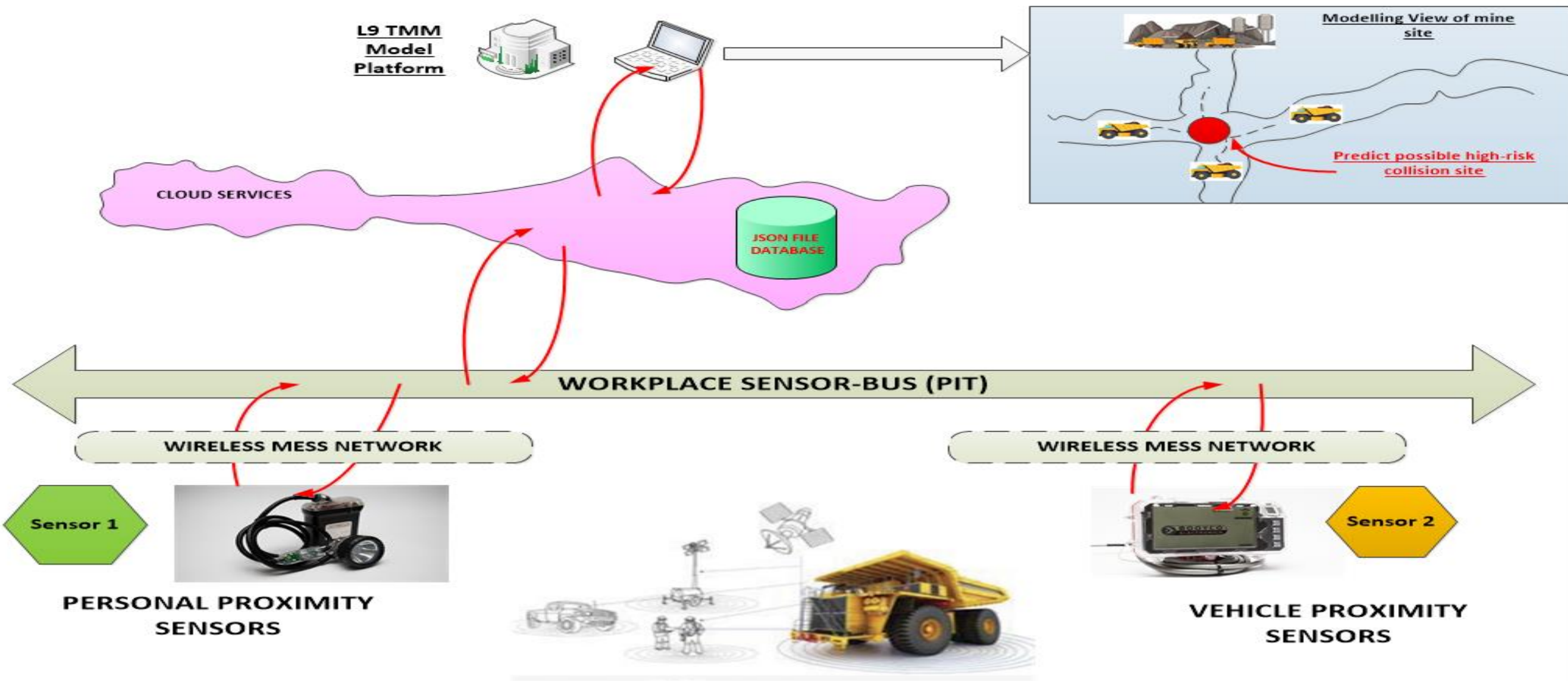
THANK YOU

Braam Greeff
bgreeff@csir.co.za