Using AVR to address challenges in WSH Training

Sridhar Sunkad
Managing Director, EON Reality

Challenges in Workplace Safety and Health

BY 2030
HALF

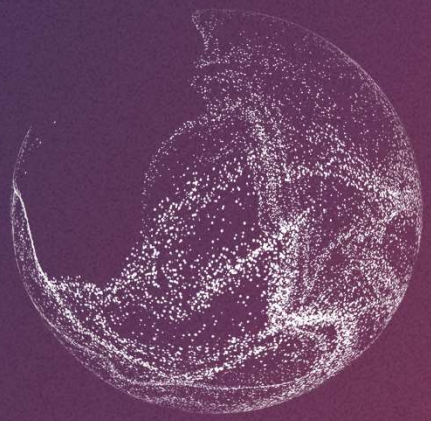
OF ALL WORKERS IN JAPAN AND 33 PERCENT OF THE U.S. WORKFORCE WILL REQUIRE RETRAINING

- Automation will **displace between 400m and 800m people worldwide by 2030**, but the report also suggests that automation can **create enough new jobs if the workers are retrained**
- **Countries should invest heavily in retraining workers** that need to change careers.
- **375 million workers who lose their original jobs** may need to **switch careers and retrain by 2030.**
- The shift could be on a scale **not seen since the transition of the labor force out of agriculture** in the early 1900s in the United States and Europe
- Governments, Academic institutions and enterprises need to **invest in a new innovative knowledge transfer solutions**

McKinsey Global Institute Dec 2017 Report

Global Challenges

- Fatality rate: 1.4%(3-year average) in SG as of 2018
- High Risk working environments
- Critical Decision-making Skills
- Adoption to new H&S practices
- Industries are not tech-ready yet



The Negative Scenario: Ai Empowered Machines

Most jobs that exist today will disappear within decades.

- As artificial intelligence empowered machines outperform humans in more and more tasks, it will replace humans in more and more jobs. Consequently, by 2050 a new class of people might emerge – the displaced & useless class.
- People who are not just unemployed, but unemployable
- However, this is not a humane solution: a job is more than salary: it's purpose, it's meaning, it's identity and it is dignity.

Elon Musk Replaces Robots At Tesla Factory:

Humans Are Underrated

- Elon Musk has **replaced the highly-touted automation system** at Tesla with a better, more intelligent paradigm: **humans.**
- Tesla's Model 3 production facility is regarded as one of the most advanced car manufacturing plants in the world but has been a complete failure.
- Musk chose to make the '**last mile' of production entirely automated, and it blew up in his face.**

How Augmented Virtual Reality Platform (AVR) can address these challenges

The Positive Scenario:

Human 2.0: Enhanced Humans

- **Empower 3.8 billion people** to **grow beyond their current human constraints**
- EON Human 2.0 Vision is to **blend man & machine** in a **symbiotic partnership**;,
- **Democratize access to fast knowledge transfer** for everybody on the planet,
- Ask the big questions and **Create new exciting Job opportunities**

Increasing The Speed Of Communication Between Man & Machine

- **“Speed Of Thumb” Too Slow, Neural Lace Too Far Away**
- Today the **bandwidth is too slow,** we communicate at the **“speed of thumb” with mobile devices**.
- While futuristic technologies such as **neural lace** supported by Elon Musk could achieve instant connection with machines, they **will take too long time** to develop to prevent the negative scenario.
- **Humanity Needs A Solution Today!**
- We believe that **EON H2.0 can provide this solution** and significantly **increasing the speed of communication between man-machine** by using **Augmented Virtual Reality (AVR)** fueled by Artificial Intelligence (AI) and Internet of things (IoT)

2.5B Workers Need Fast-knowledge

- 2.5 billion workers are not supported by ICT today
- Contextual knowledge on the spot

Use-cases

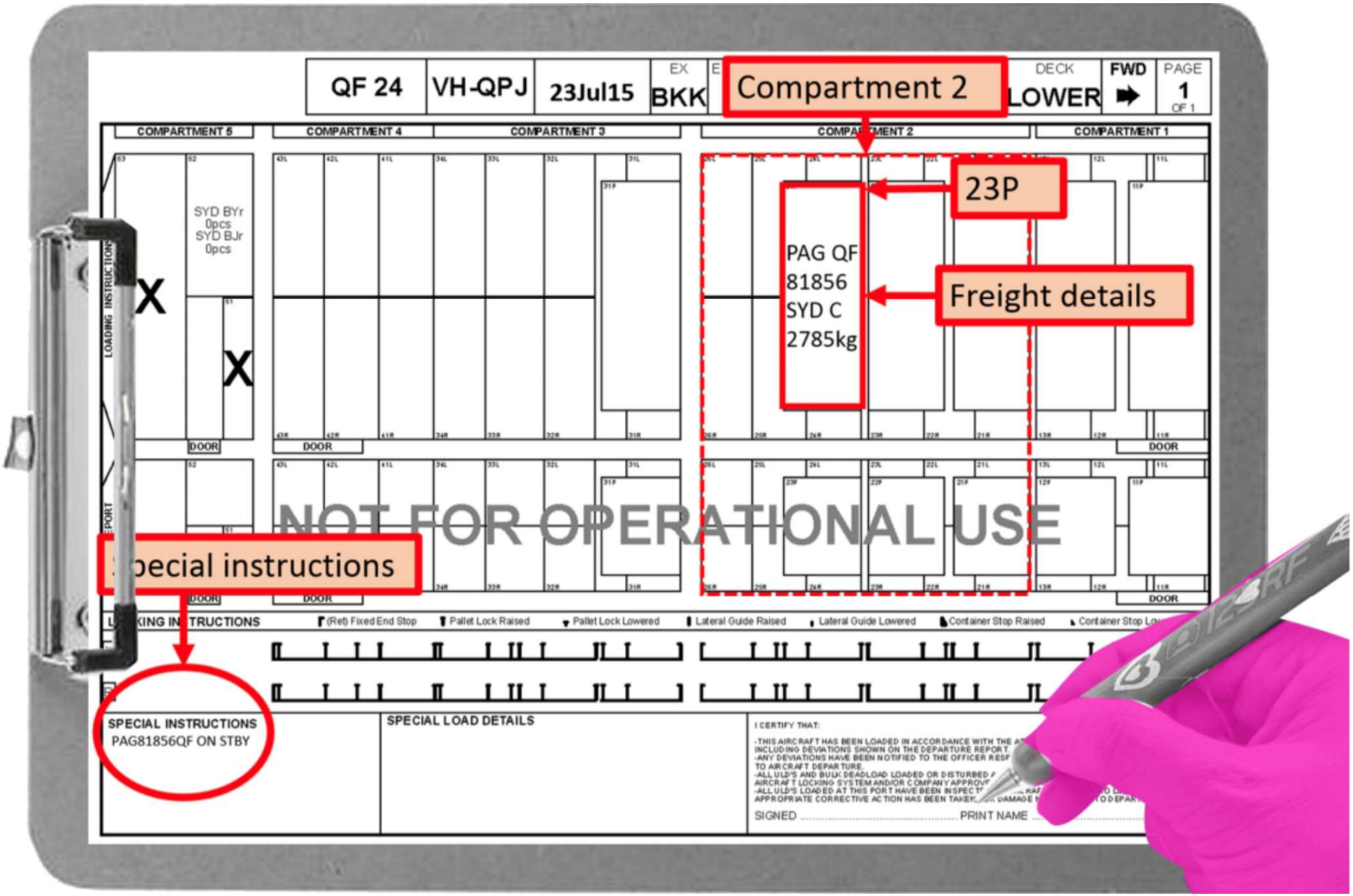
Enabling Industries to be always a step ahead

SECURITY TRAINING

- 1 Emergency response Simulator
- 18 Vehicle maintenance VR Training modules
- 3 Fire Prevention VR training
- 1 Mobile Game

AR ASSIST - AEROSPACE

AVR solution for staff on-site for SATS, a leading provider of gateway, cargo and security services at the Changi airport in Singapore, rated #1 in the world has selected EON Reality AVR platform to enable interactive AVR solutions for field workers to enhance worker capacity and productivity.


QF 24
VH-QPJ
23Jul15
EX
BKK
Compartment 2
DECK
LOWER
FWD
PAGE
1
OF 1
COMPARTMENT 5
COMPARTMENT 4
COMPARTMENT 3
COMPARTMENT 2
COMPARTMENT 1
SYD BYr
0pcs
SYD BJr
0pcs
23P
PAG QF
81856
SYD C
2785kg
Freight details
X
X
DOOR
NOT FOR OPERATIONAL USE
Special instructions
LOADING INSTRUCTIONS
(Ret) Fixed End Stop
Pallet Lock Raised
Pallet Lock Lowered
Lateral Guide Raised
Lateral Guide Lowered
Container Stop Raised
SPECIAL INSTRUCTIONS
PAG81856QF ON STBY
SPECIAL LOAD DETAILS
I CERTIFY THAT:
SIGNED
PRINT NAME

+25%

UPGRADES ON PREVIOUS POC

SATS – a leading global provider of cargo handling and logistics services – announced that they are rolling our EON Reality's AVR Platform – initially to ***600 employees*** at Changi Airport to create ***Smart Workers.***

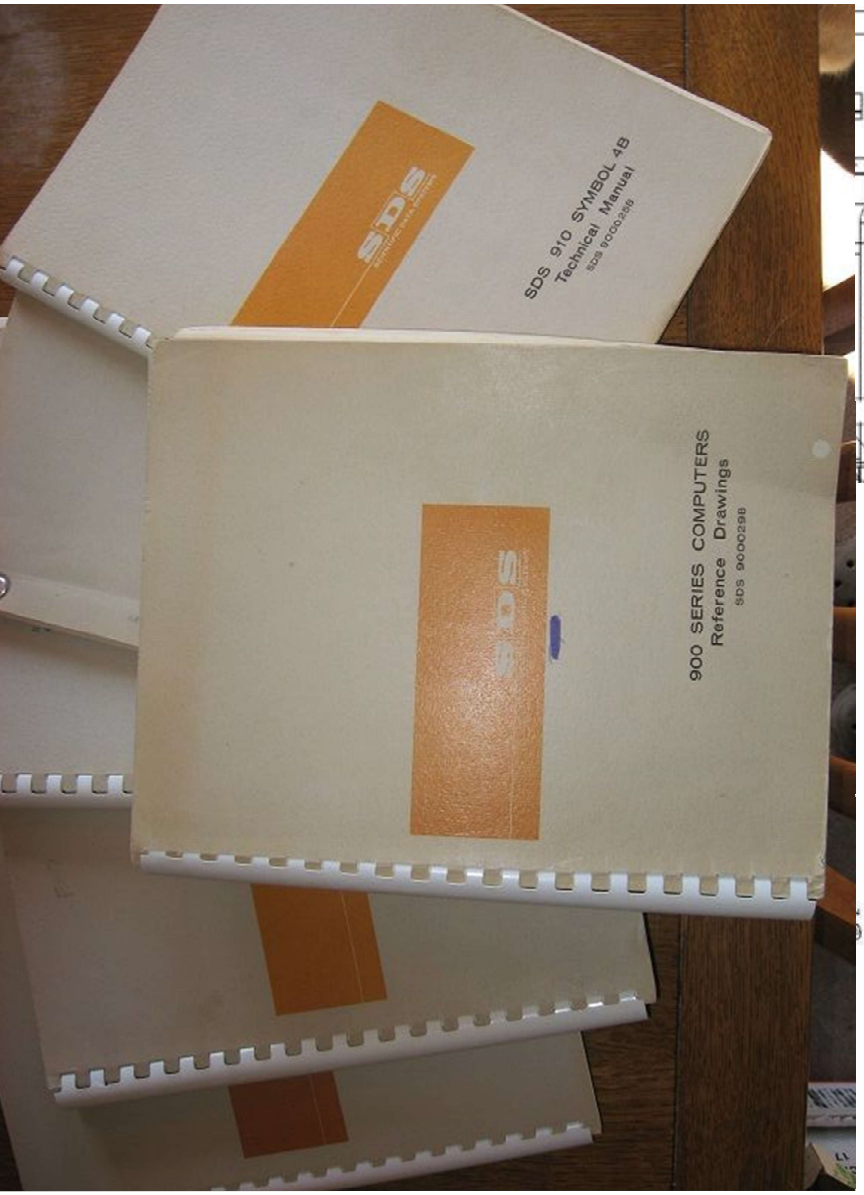
EON Reality has developed an AR Assist solution that enables ground crew to retrieve flight information from the cargo pallets, for cargo and baggage handling. This also enables the crew to communicate real time with the airport command centre.

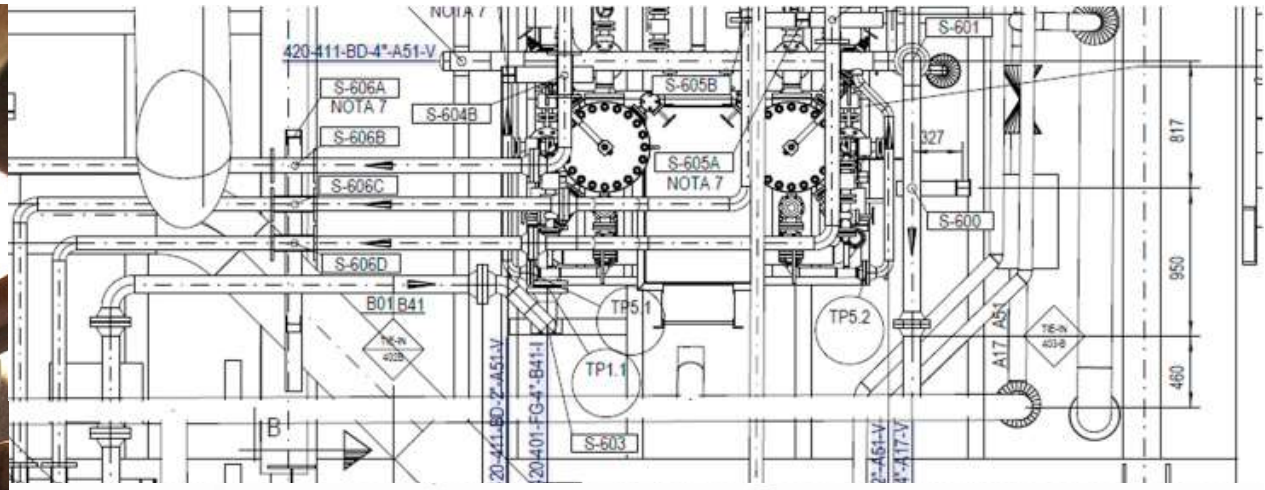
Changi Airport sees ***time savings of 25%*** in turn-around of aircrafts. Read more [here](#).

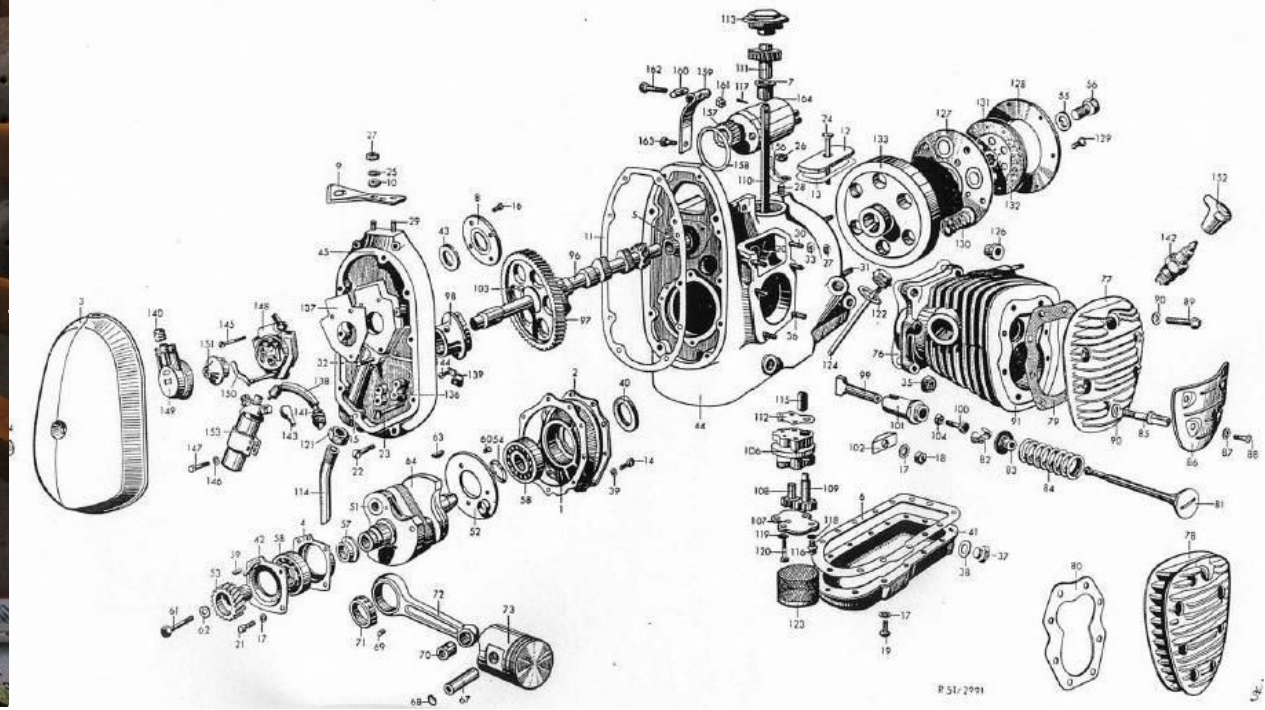
SBS Transit

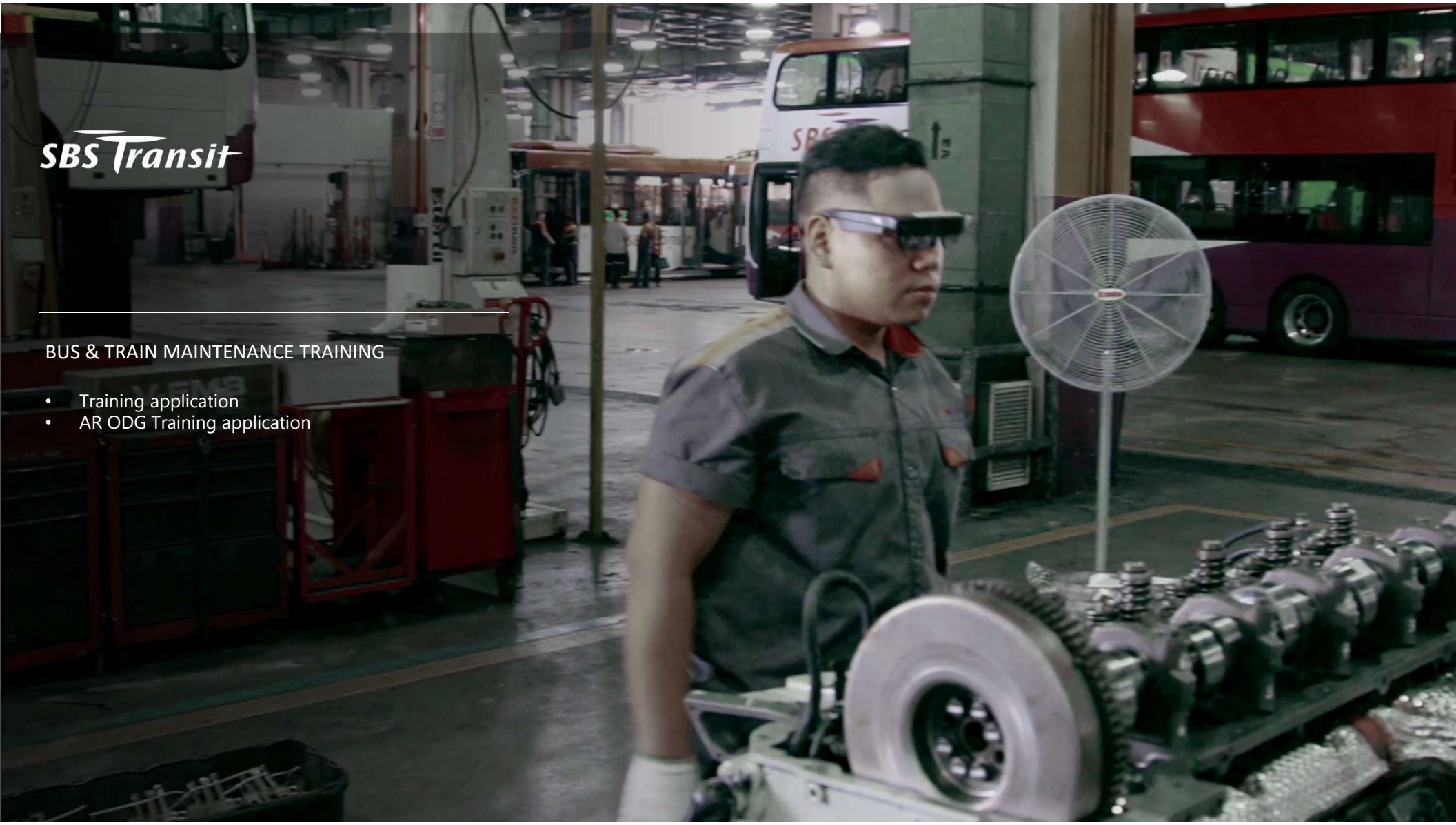
BUS & TRAIN MAINTENANCE TRAINING

- Tablet Training application
- AR ODG Training application POC


SDS 910 SYMBOL 4B
Technical Manual
SDS 900D258
900 SERIES COMPUTERS
Reference Drawings
SDS 9000298

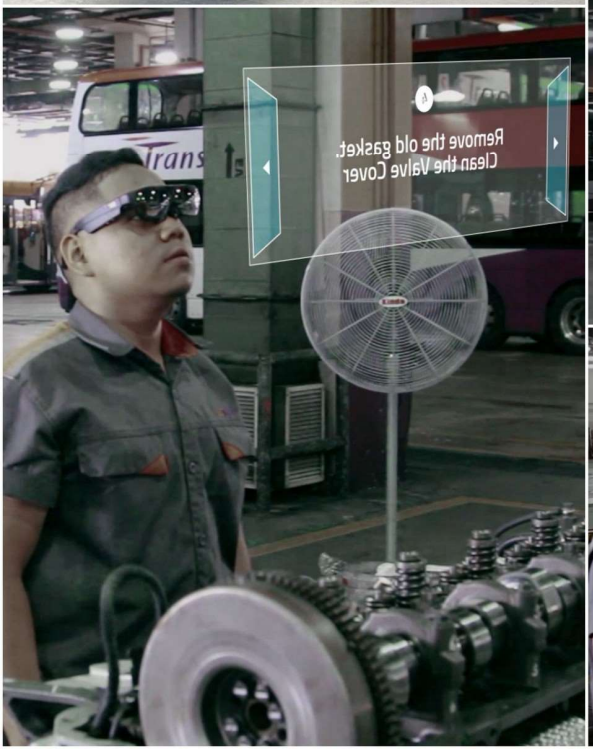

NOTA 7
420-411-BD-4"-A51-V
S-606A
NOTA 7
S-604B
S-606B
S-606C
S-606D
S-605B
S-605A
NOTA 7
S-601
S-600
S-603
B01 B41
TP5.1
TP5.2
TP1.1
327
817
950
460
A17
A51





BUS & TRAIN MAINTENANCE TRAINING

- Training application
- AR ODG Training application



SBS Transit

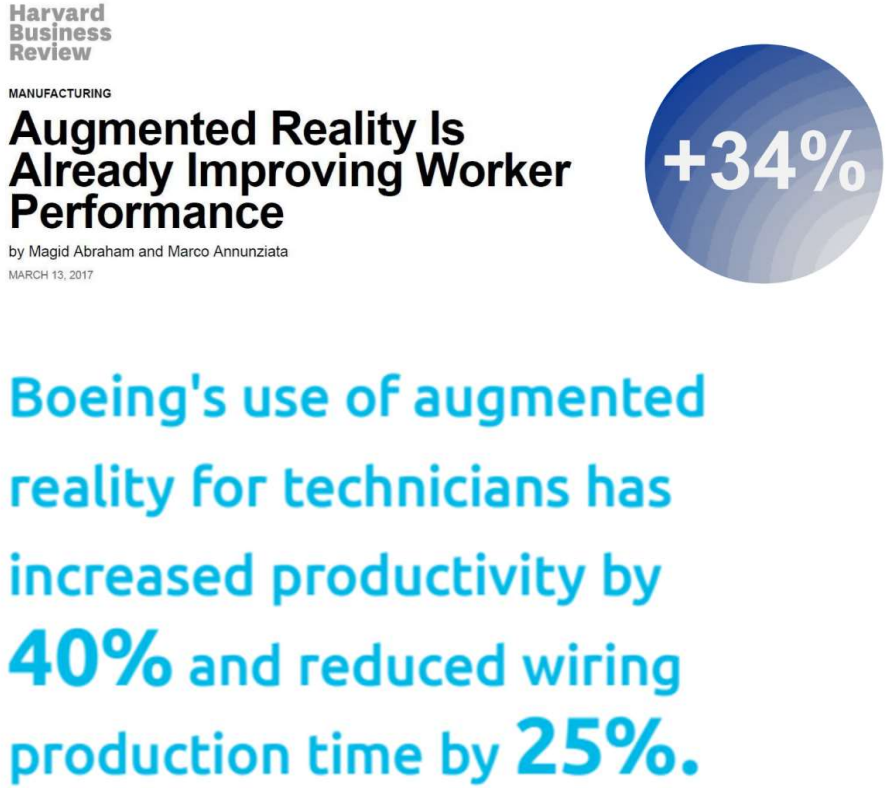
- **Provide field engineers with more knowledge**
- **Reduce standstills**
- **Shorten repair times**
- **Reduce operational costs**

Ref:
https://www.straitstimes.com/singapore/transport/bus-technicians-get-certification-boost

34% Increase in Productivity

Independent Analyst ROI Studies

- In this **AVR Benefits** document we have compiled a number of studies made by global leading analysts
- They conclude that that using Augmented and Virtual reality provides significant **improvements in knowledge transfer**
- **along with 34% to 40% productivity** improvements



Proven Value

Harvard Business Review; Augmented Reality **increased productivity** of ***34% on first use***.

British Petroleum; Knowledge ***retention*** by virtual-world trainees is ***80% better*** compared to traditional learning.

Exxon Mobil; Virtual Reality simulations are ***highly effective*** in training workers on how to prevent incidents.

Changi Airport; sees ***time savings of 25%*** through the use of Augmented Reality.

THANK YOU

eonreality.com