HARD-LINE

teleop

HARD-LINE RRC

RADIO REMOTE CONTROL

Enhancing Safety and Productivity Through Remote-Control and Tele-Operation

SINCE 1996

COMPANY BACKGROUND

WHY TRUST HARD-LINE?

HARD-LINE has been providing solutions for over 25 years and in that time we have evolved from a company servicing and repairing remote controls to a global leader in remote-control and Tele-Remote technology, automation, and communications for heavy industry.

With thousands of projects and years of experience, we have the people and expertise necessary to assist our customers and partners in reaching their goals through the successful implementation and use of technology.

HEAD OFFICE
SUDBURY, ON
CANADA

TECH CENTRE
SUDBURY, ON
CANADA

OFFICE
SALT LAKE CITY, UT

OFFICE
LIMA
PERU

OFFICE
SANTIAGO
CHILE

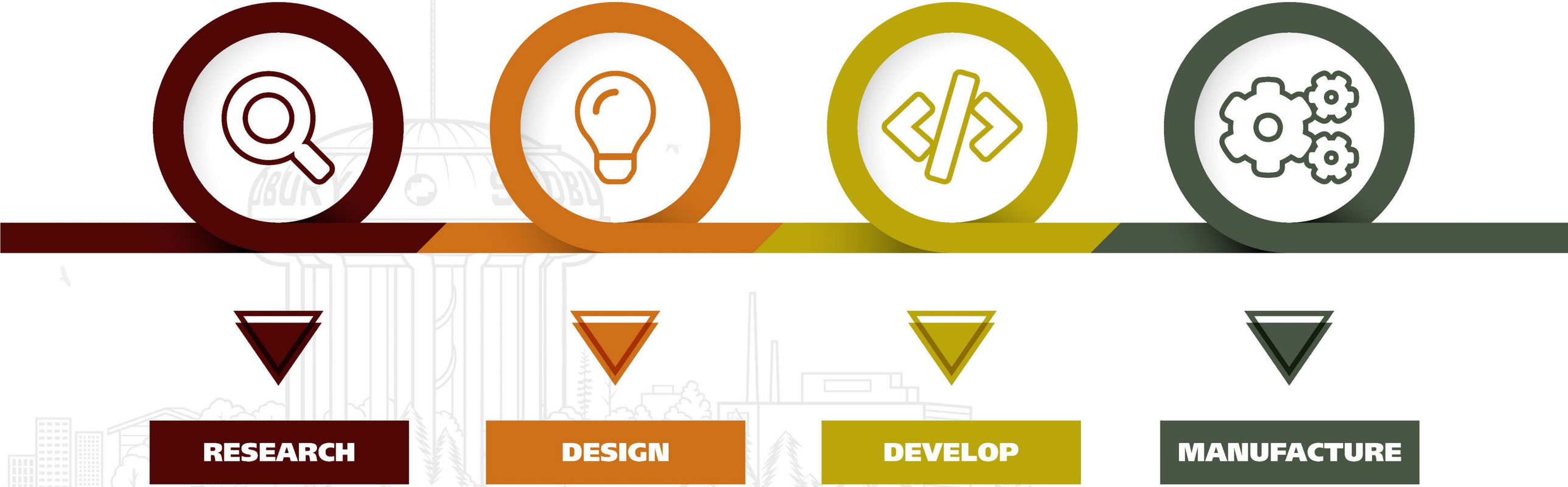
SUDBURY, ON

SANTIAGO

SALT LAKE CITY, UT

LIMA

DEVELOPMENT



SERVICE

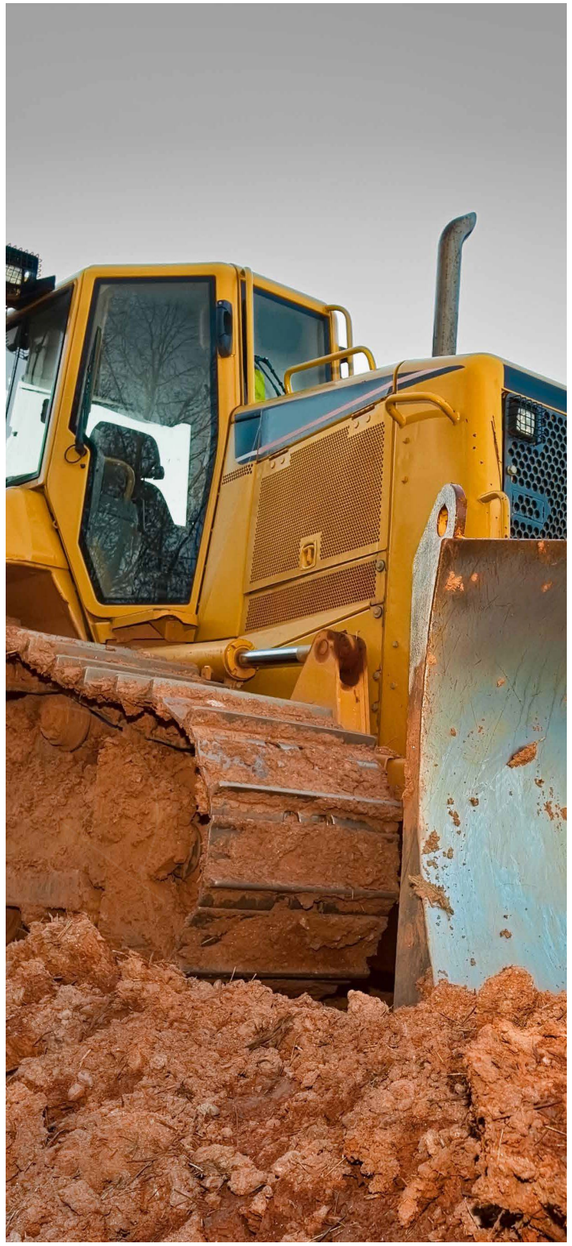
INSTALL

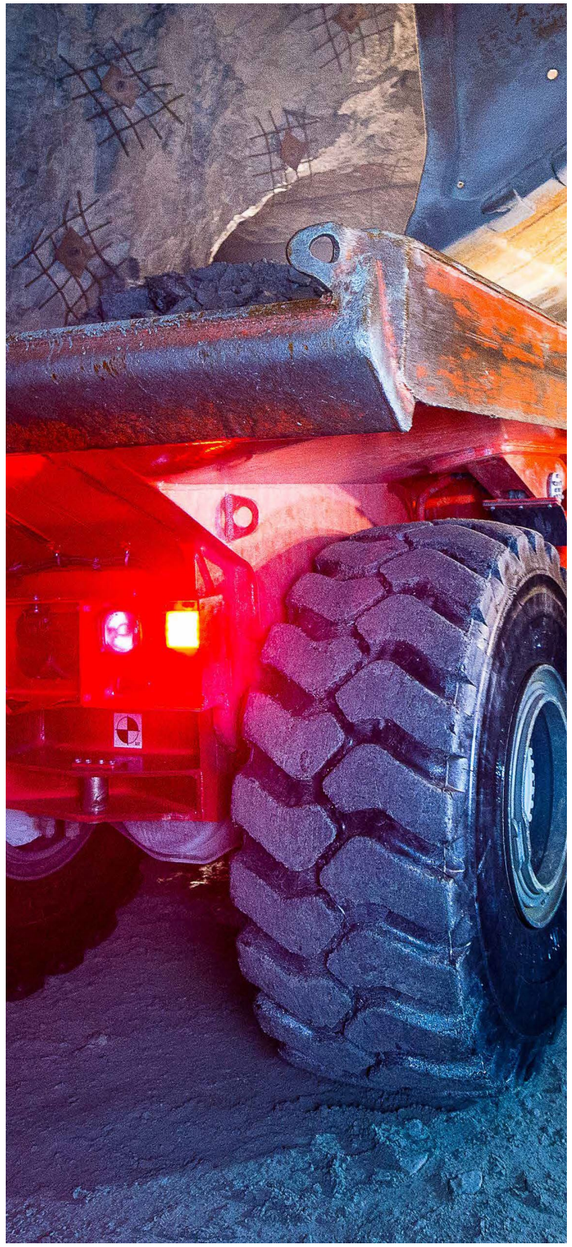
TRAIN

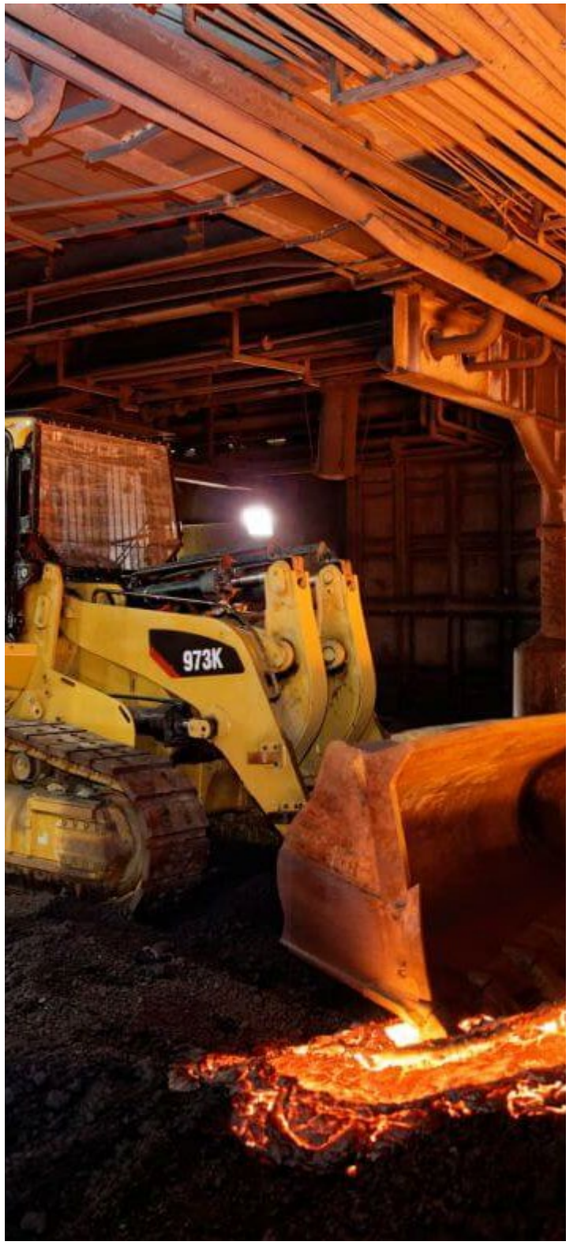
MAINTAIN

SUPPORT

ANY MACHINE
ANY MAKE **ANY**
MODEL **ANY**
YEAR





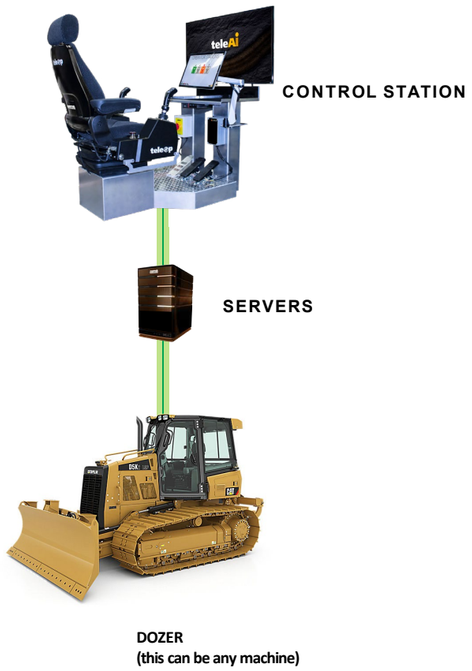


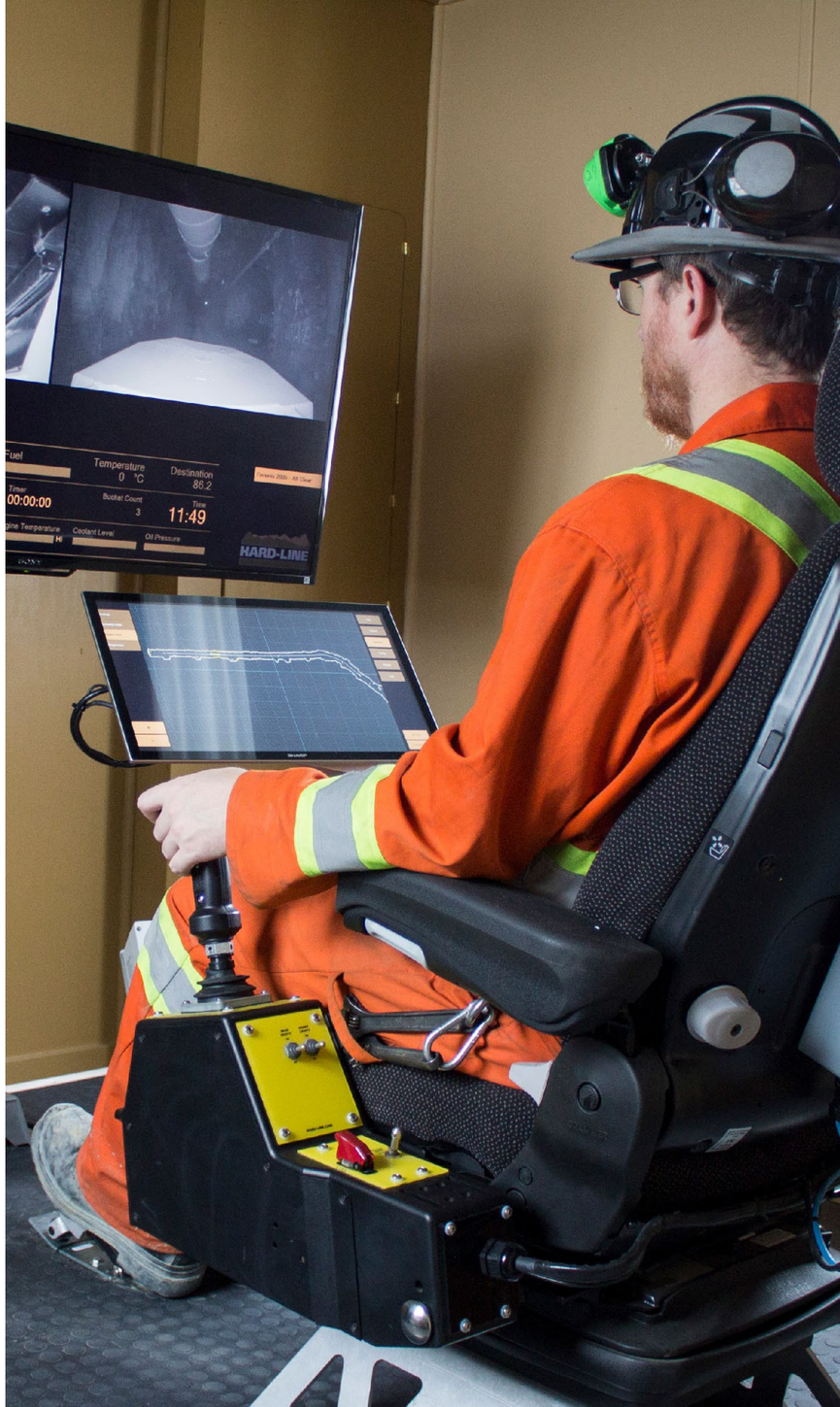

CAT
973K
HARD-LINE
RRC
RADIO REMOTE CONTROL


AP ##
100
AUTO
R N D 1
8 KPH
10:22
Workzone XXXX - Error
Workzone XXXX - Estop Activated
Workzone XXXX - Barrier Open
Articulation
6
17m
Destination
Bucket Count
7
Timer
00:13:26
RPM
2104
Engine Temperature
B
H
Coolant: Level
Oil Pressure
973D
teleop

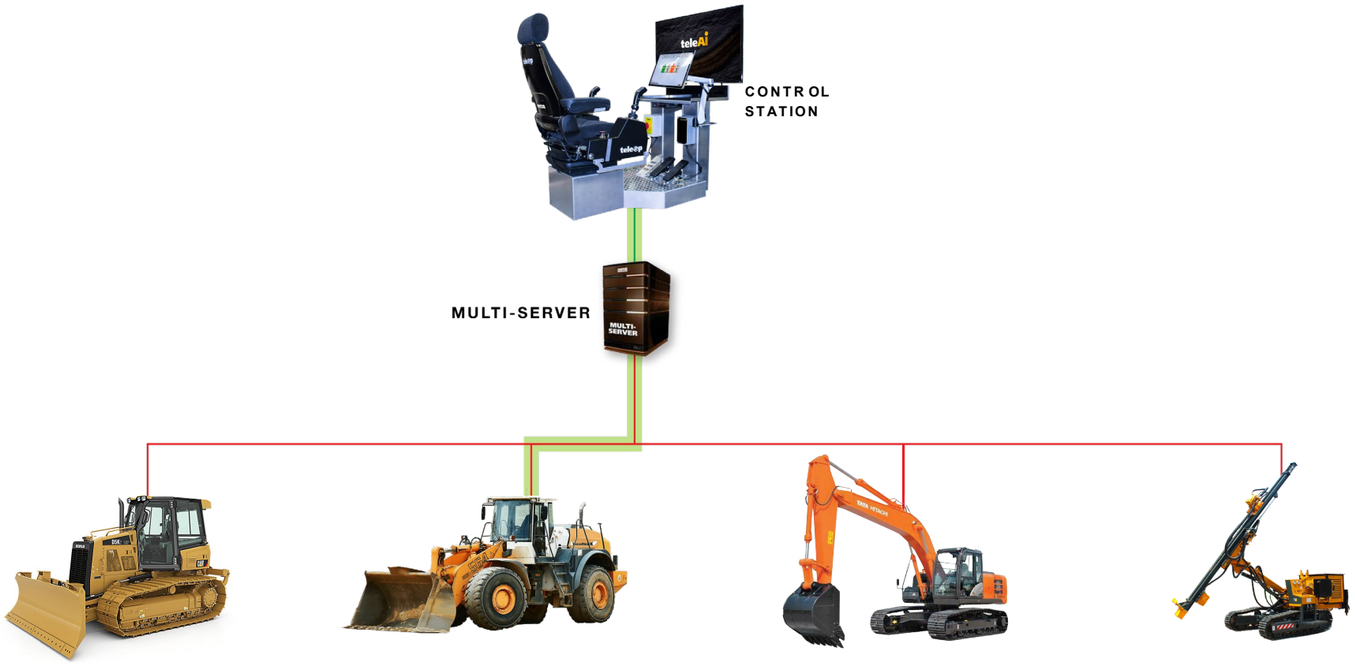
teleop

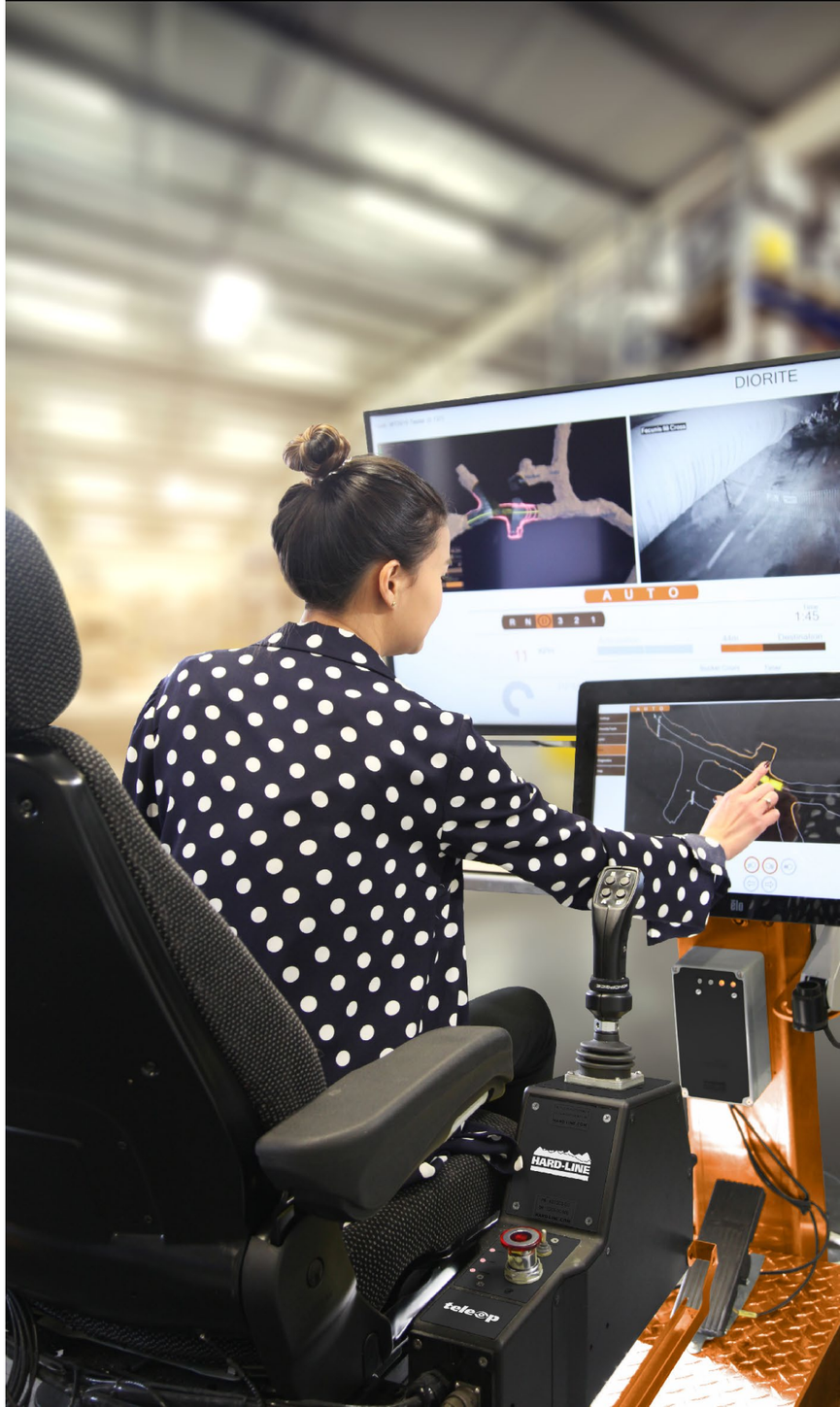
The base system. One machine that needs an operator to be able to control from a remote location.





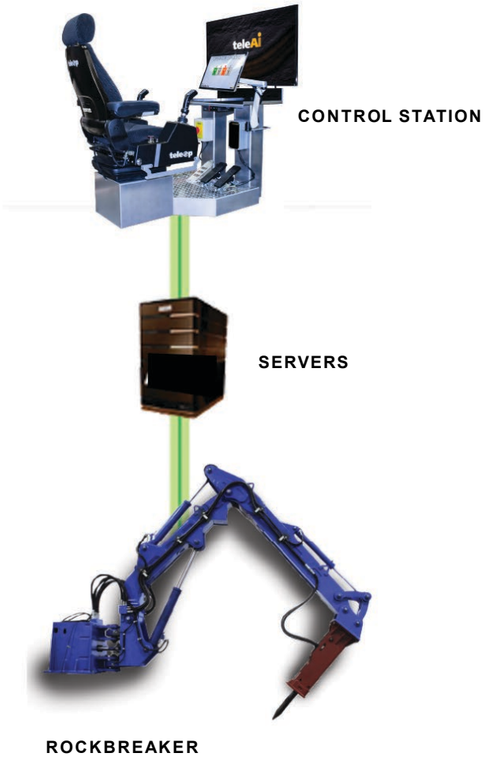
This upgrade allows several machines and/or chairs to be added to the system. Operators can choose whatever machine they need without moving to another chair.





AUTO
ROCKBREAKER

Operators have the ability to automate many rock breaking tasks and increase employee productivity on low usage equipment.



CASE STUDY

RRC & TELEOP FOR MIXED FLEET

CHALLENGE

The purpose of this case study is to outline the benefits of using HARD-LINE's Radio Remote Controls (RRC) and TeleOp Control Systems on several heavy-duty machines at the mine starting in 2012. A unique challenge the mine had to overcome was that the open pit operations were located directly above several historic underground mines. This environment introduced many hazards and had potential for high-risk scenarios.

APPLICATION

The company initially purchased five RRC systems to operate a CAT D10T dozer, CAT 374 excavator, CAT 345D excavator, CAT 6050 hydraulic shovel, and a CAT 994F front-end loader. The systems enhanced the operator's safety by enabling the operation of heavy machinery from a distant location. The mine later added Hitachi 5600-6 and 5600-7 Hydraulic Excavators with HARD- LINE's Teleop system to the fleet.

BENEFITS

TeleOp and RRC systems eliminate the operator's exposure to hazardous environments. The overall working environment improves significantly as the operator can work from an ergonomic operator control station located in an office setting. Ultimately this method provides enhanced safety benefits, while optimizing the mine's development and production schedule.

MORE TONS
are sent to the mill for increased profit and increased safety

NO LOSS
of life or injury was sustained in this perilous work site


PRESENTED BY
HARD-LINE