

# *InnoGlas*

Augmented Reality Smart Glasses Solutions

Powered by Artificial Intelligence, Driven by Innovation

# Smart Glasses Solutions

## Key specifications

### Lightweight & Comfortable

Comfortable to wear the entire day  
**Lightweight** at only 45g  
Does not emit heat  
Adaptable to all head shapes and  
95% of users' iris distance

### Camera Specs

3x optical zoom  
High clarity even under poor  
lighting conditions

### Plug & Play

Connects to any device that runs  
Android 5.1 and above via USB



### High Capability & Endurance

Up to **10 hours** at full charge  
(plugged to mobile device)  
Power consumption is only  
20% of handphone battery,  
power performance is 10x  
better

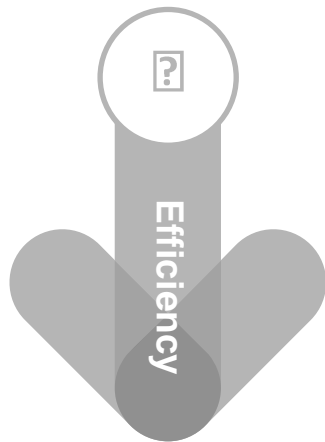
### Display Clarity

Ultra-high optical resolution  
with **100000:1** contrast  
High clarity guaranteed under  
any lighting condition

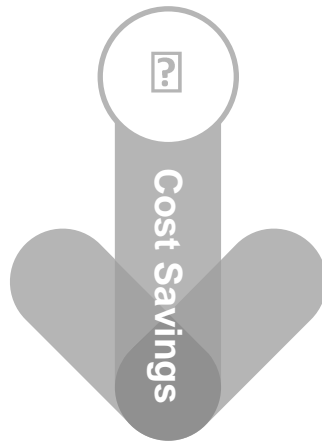
### High Safety Standards

Wireless module does not emit  
harmful radiation  
Display does not block the view of  
user

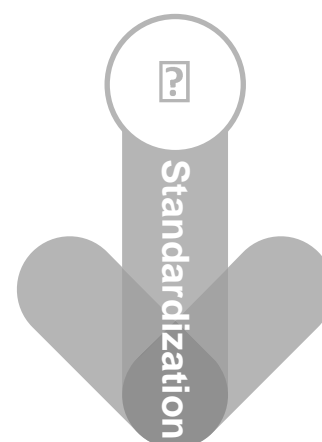
# Common Business Problems



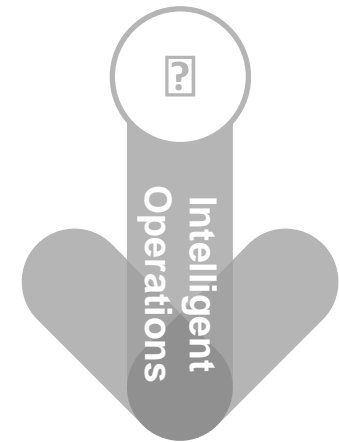
When equipment is faulty and the on-site technician is unable to fix it, he will contact a domain expert on the phone. There may be possible miscommunication or inaccurate descriptions of the problem. Flow of information is not smooth, which will affect the speed and quality of repair.



The domain expert would have to travel to the site if the problem is unsolved. This is a huge waste of time, money, and human resource.



Repair or routine maintenance work are part of standard operating procedures. However, it may be difficult to adhere to strictly, lacking in management, which can be a hidden safety hazard.



There are many types of repair parts, with corresponding repair manuals. The methods are complicated, and as a result, workers are more prone to making mistakes.

# Value Proposition of InnoGlas Solutions



## Efficiency

On-site technician is equipped with a pair of AR glasses, such that the whole troubleshooting and repair process is transmitted to the domain expert in real-time, and accurate guidance is given.



## Cost Savings

The domain expert can lead the entire process behind the scenes, which helps to reduce cost and time for physical travel.



## Standardization

With standardized electronic processes, step-by-step prompts, recording and prompting of key positions, the risk factor caused by human error is reduced.



## Intelligent Operations

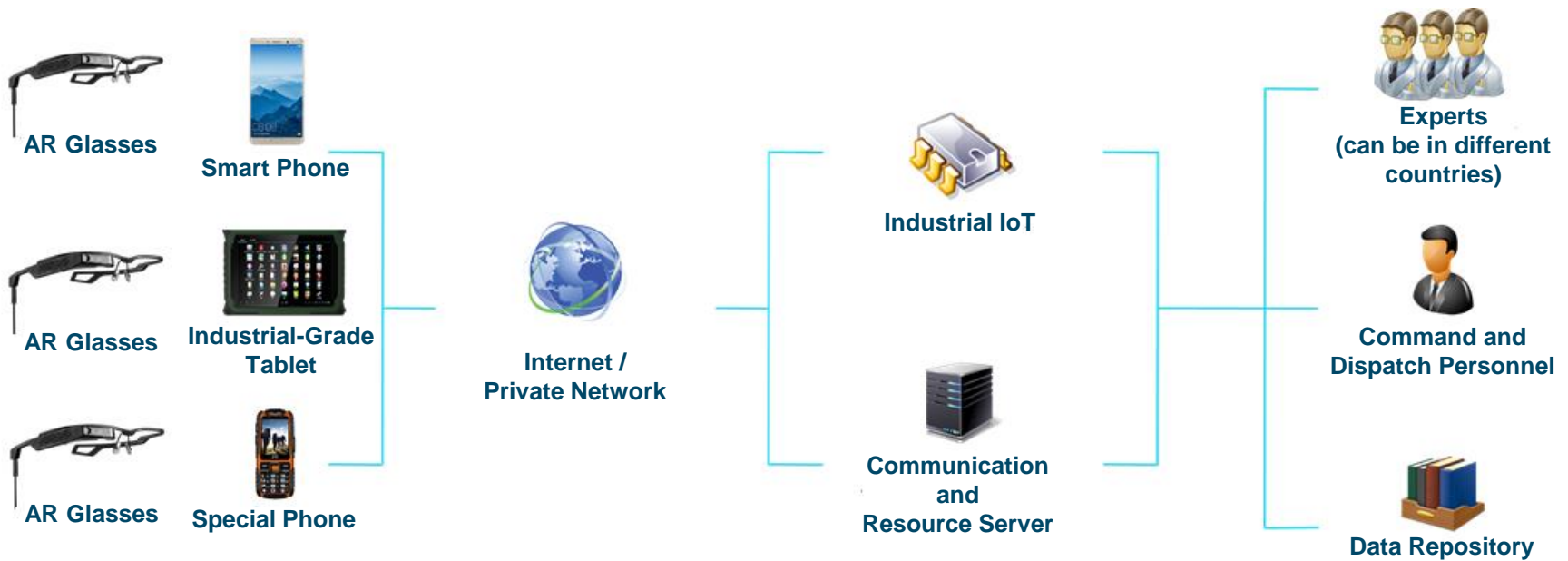
Equipped with smart image recognition technology, the glasses automatically detects the part number, procedure, parameters, etc. This helps to assist the user in the repair process, thereby improving the maintenance workflow and quality.

# Solutions 1

## Remote Expert Assistance

### Remote Expert Assistance

Through smart glasses from the first-person perspective, experts can remotely connect to service stations or equipment repair sites, guide the wearer of the glasses to solve problems, and improve communication efficiency through real-time video, text, images, AR annotations, etc



# Solutions 2

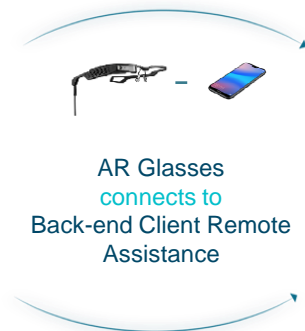
## Video Recording

### Video Recording

After disconnecting from the network, the smart glasses will contain a **video recording of the entire workflow** from the wearer's perspective. The video can then be used for reviewing and further training, generate maintenance reports, produce useful key data and information using video analytics, and backup.



- HD video recording
- Automatic management
- Speech to text conversion
- Workflow customisation
- Scan code for sign-in
- Object recognition
- Facial recognition



- First-person view in HD video
- Structured data
- Operation Log
- Node information
- Recognition information

**Public Web**  
.....▶  
**Private deployment**

### Application and analysis

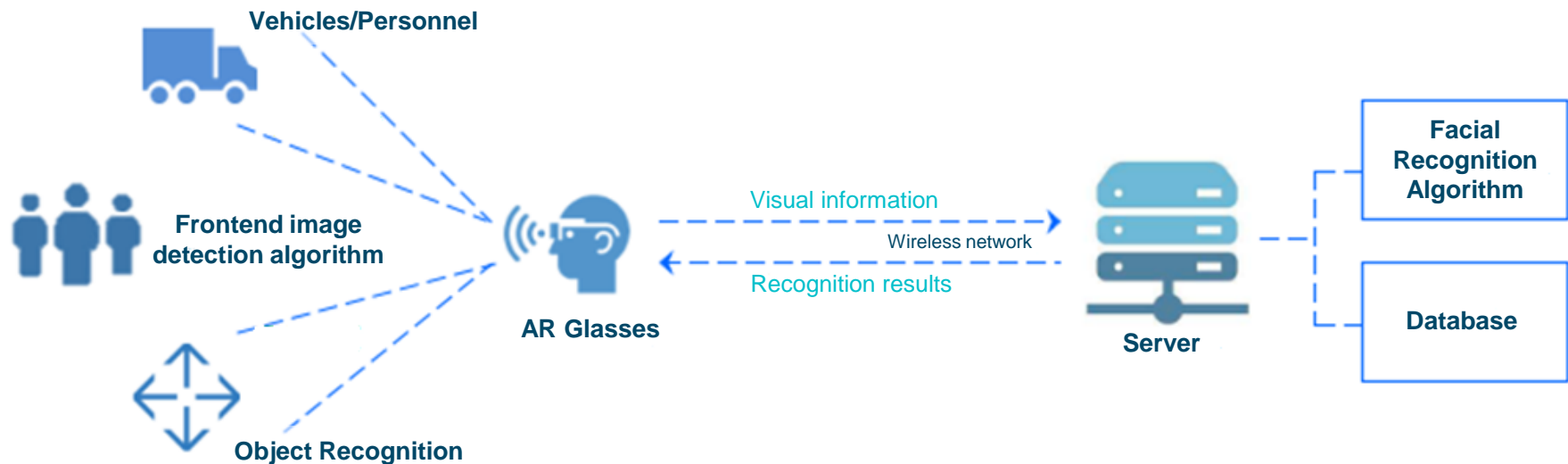
- ✓ Maintenance supervision
- ✓ Real-time control
- ✓ Efficiency analysis
- ✓ Process Optimization
- ✓ Product management
- ✓ Equipment layout
- ✓ Production inspection
- ✓ Anomaly check
- ✓ Environmental check
- ✓ Personnel detection
- ✓ Approach analysis
- ✓ Environmental Analysis

# Solutions 3

## Intelligent Identification

### Intelligent Identification

AR glasses can be integrated with object recognition, QR code / barcode recognition, license plate recognition, and face recognition technology. It can then be trained using deep learning model algorithms to intelligently identify and analyze vehicles, equipment, accessories, and on-site personnel to help workers improve work efficiency

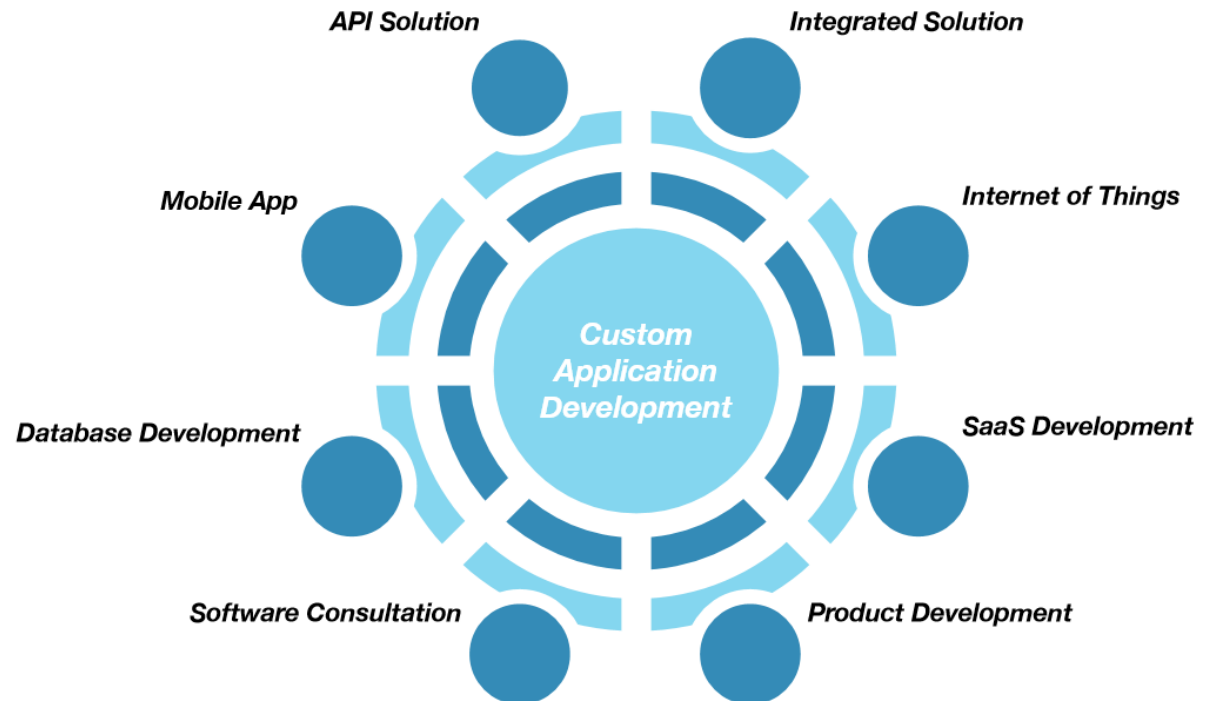


# Solutions 4

## Deep Custom Integration

### Deep Custom Integration

With our deep experience in the manufacturing industry and big data analysis, we can develop AR solutions that not only dramatically improves your operational efficiency, we can also combine and analyze various data points of our platform with the existing data of your organization. This will produce valuable information that will help you improve productivity, increase efficiency, and lower costs.







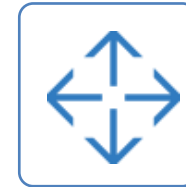
**Hands-free**



**Real-time  
communication**



**First-person  
view**



**Portability**

# Remote Expert Assistance

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Our Solutions using AR glasses enable real-time interactions - through **text, voice, and markers/annotations** - between users.

The first-person view of the user or equipment maintenance site can be seen in **real-time**, connecting back-end expert resources for troubleshooting and remote maintenance guidance.

The glasses can also be integrated with intelligent identification and data analysis functions to optimize workflow. This will help to build an **expert knowledge base** to improve the overall equipment maintenance efficiency and service level.

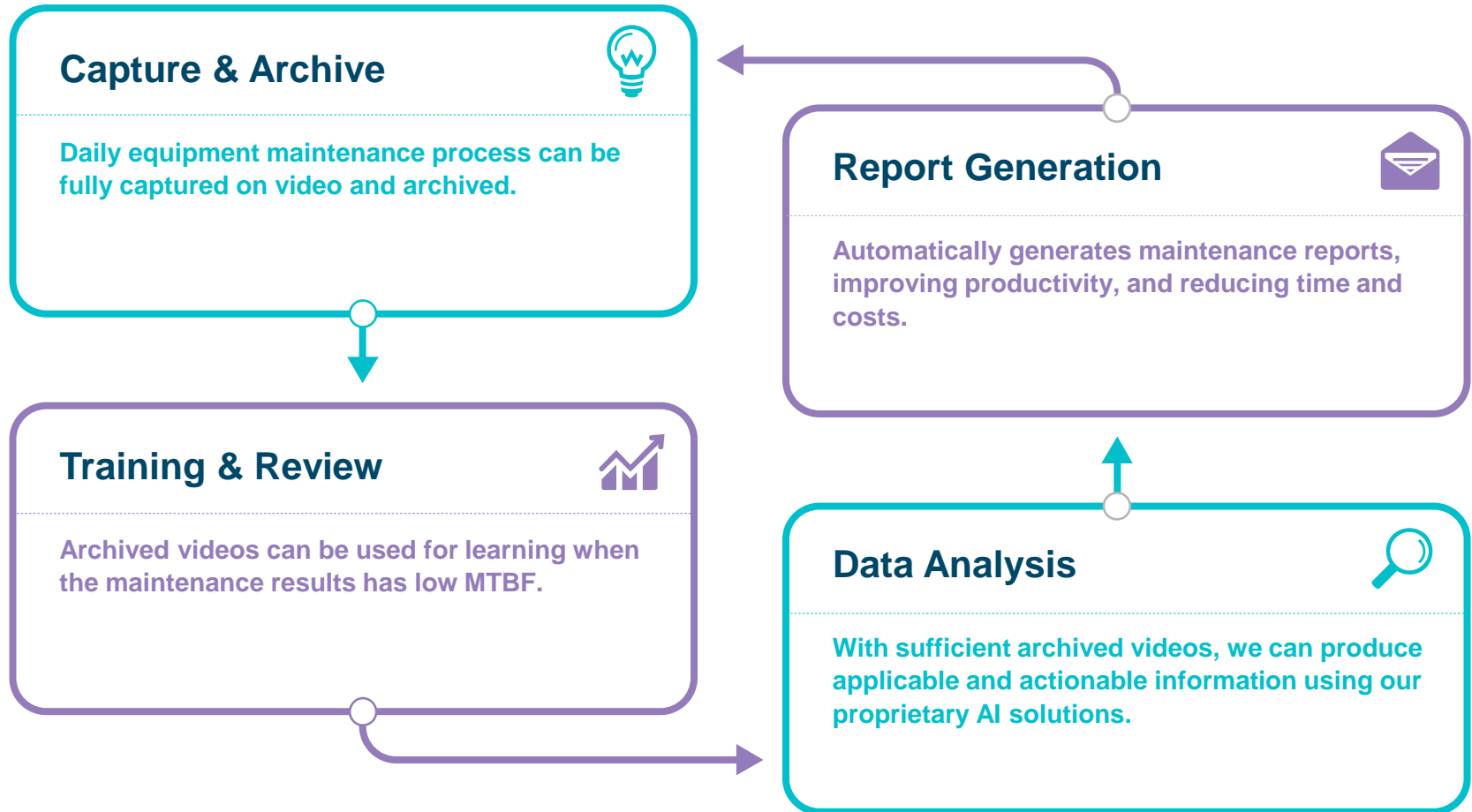
# System Architecture

## AR Functions and Service System

Terminal	Smart AR glasses	Experts and data centre system	Smart Operation system
Core Functions	<p>Recording and AR display of process</p> <div data-bbox="374 701 683 801">Video recording Playback</div> <div data-bbox="374 829 683 929">Display of local SOP &amp; guidelines</div>	<p>Remote operations</p> <div data-bbox="774 665 1010 746">Support centre</div> <div data-bbox="1039 665 1275 746">Interactive control</div> <div data-bbox="774 779 1010 861">Two way video stream</div> <div data-bbox="1039 779 1275 861">Communication Save/Playback</div> <div data-bbox="774 893 1010 975">Vocal Comms</div> <div data-bbox="1039 893 1275 975">SOP display</div>	<p>Intelligent applications</p> <div data-bbox="1335 665 1570 746">Code recognition</div> <div data-bbox="1599 665 1835 746">Procedure searching</div> <div data-bbox="1335 779 1570 861">Image judgement</div> <div data-bbox="1599 779 1835 861">PM parts Recognition</div> <div data-bbox="1335 893 1570 975">Environment Health Safety</div> <div data-bbox="1599 893 1835 975">Customized applications</div>
Network	Not Applicable	Public or private cloud network	Private cloud network
Data centre	Local connected mobile device	Experts and knowledge database	Data base and AI/Big data platform
Readiness	Plug and play	Remote Cloud ready, <b>Innowave Tech</b> support for private cloud deployment	<b>Innowave Tech</b> support for Custom Platform or Application development

# Use Case 1

## Daily Maintenance Record



# Use Case 2

## Remote Guidance & Assistance



- Technician working on an equipment receives instructions from Supervisor remotely.
- View seen by Technician through the glasses will be streamed to an application on a mobile device.
- View can be recorded as video to be reviewed for further training or after-action review.
- Supervisor, equipped with mobile device, will oversee the situation through the eyes of Technician.
- He will provide instructions to Technician using text, annotations, or voice – directly on the mobile application.
- View can be further enhanced by screen casting mobile device to a big screen.

# Use Case 3

## Standardization of Operation Procedures

### Standardization of operating procedures with autonomous supervision

Businesses can configure and record standardized workflow and transmit it to the field manager terminals.

#### Error Prevention

AR glasses display real-time prompts and reminders at important operation junctures to avoid human errors and omissions



#### Data Storage & Logging

All operational details and data for the entire business process are logged and stored, so that management can easily assess the situation



#### Report Generation

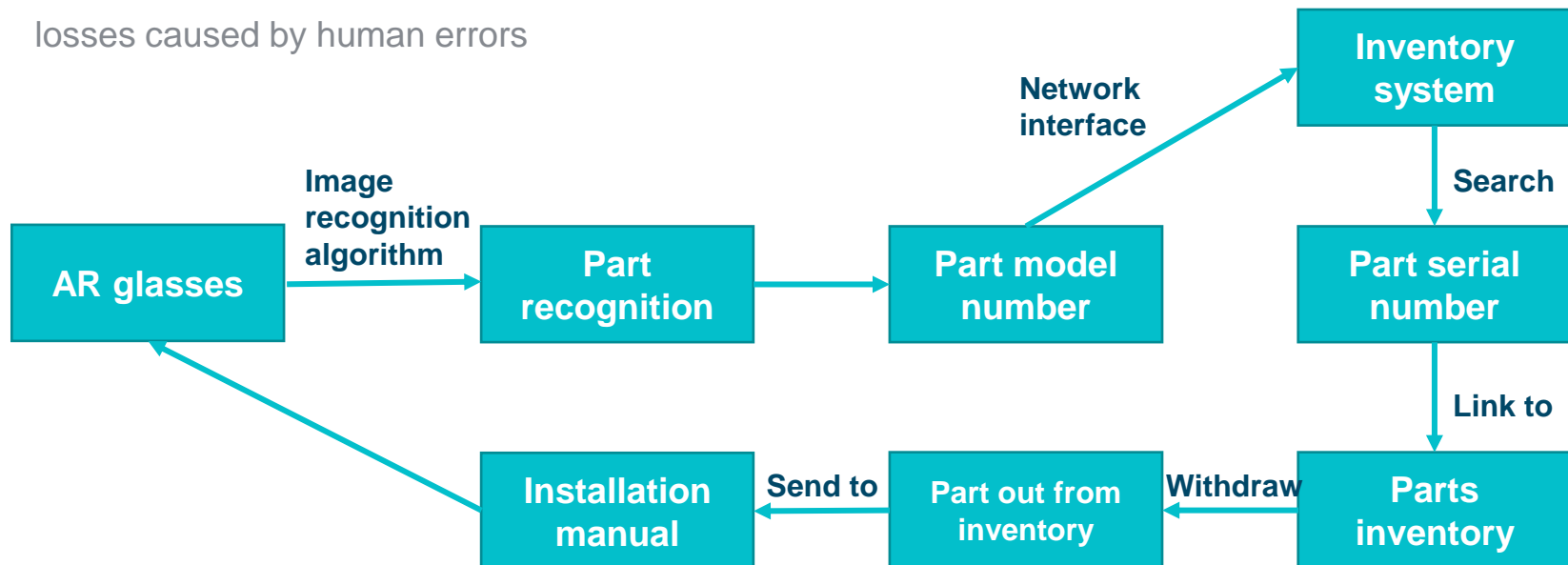
Automated generation of dashboard and report. Converts text-based report into video, complement report with images. Eliminate post event treatment and reduce workloads.



# Use Case 4

## Intelligent Inventory Management

- AR glasses recognizes the part models and automatically associates it with maintenance manuals and tutorials to help workers get started quickly.
- By identifying the barcode or QR code on the device, it can automatically correlate with inventory data and match asset information
- With intelligent analysis technology, it can automatically identify, through video, errors and violations of workers during maintenance and provide effective prompts and guidance to reduce losses caused by human errors





## ***Contact Us***

To know how you can improve your business today, contact us immediately.

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