



GLARTEK

AUGMENTED REALITY (AR)

In training, safety, manufacturing operational excellence and logistics'
within the Bioeconomy and Chemical sectors

BIOECONOMY IN THE ERA OF DIGITALIZATION WEBINAR

2022

Increase **efficiency** and **safety** of
industrial tasks performed by
frontline workers



ABOUT US

GLARTEK

A new reality for an Augmented & Connected Worker



About us

We increase operations' efficiency, safety and competitiveness through an augmented and connected workforce.

- Founded in 2017
- More than 25+ employees
- €1.5M funding in 2019
- 20+ tier 1 customers manufacturing, asset-intensive and field services
- Tier 1 partners
- Award winning and multiple R&D EU and US projects
- ISO 27001



Digitize
Assets and Tasks



Augment and Connect
Frontline workers



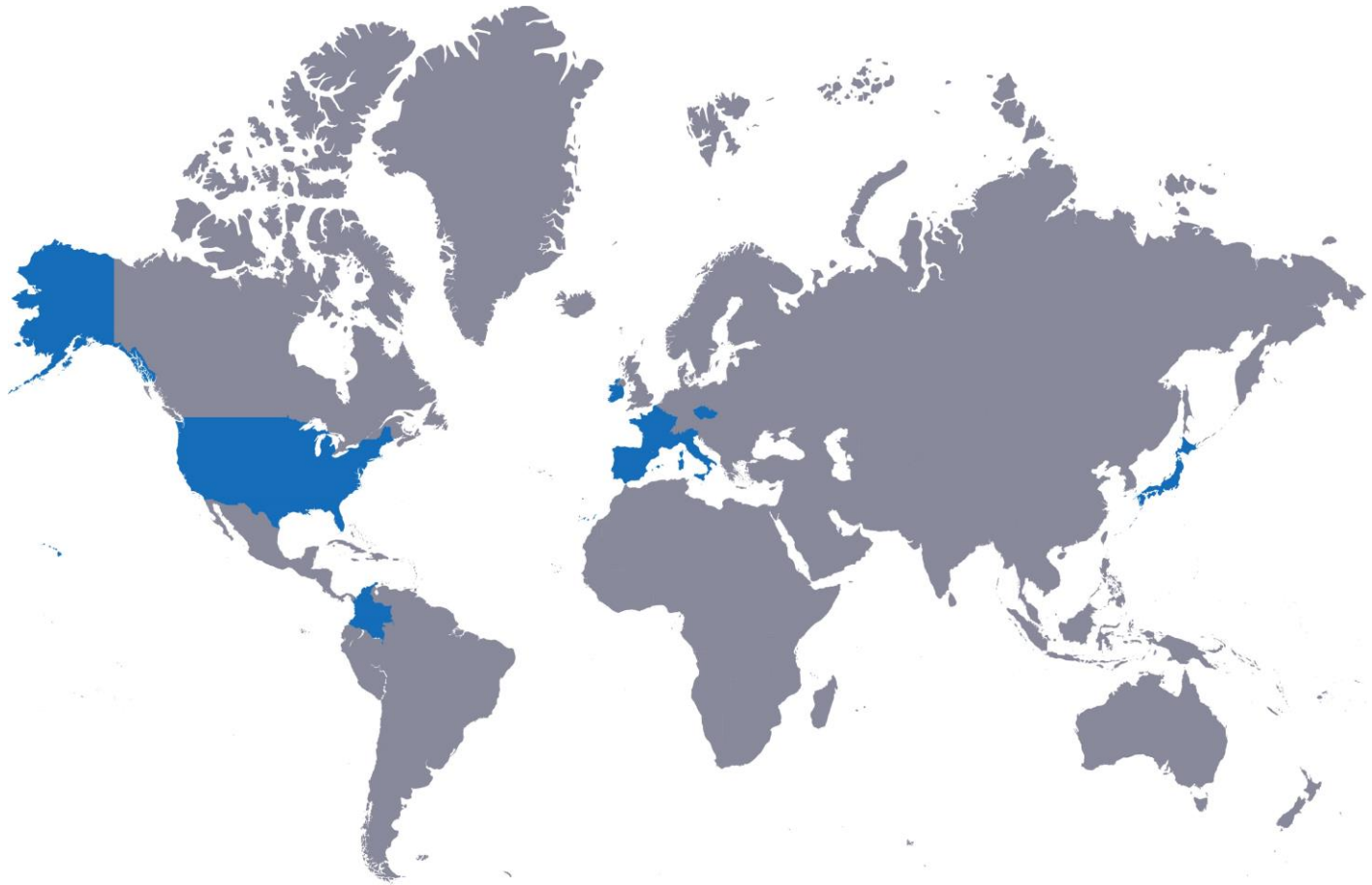
Continuous
Improvement



Operational
Excellence

ACHIEVEMENTS

Our technology worldwide achievements



20+ projects

More than 20 customers worldwide with a diversity of different projects from different industries.

7+ industries

We operate in more than 7 different industries, proving the wide usability of our solutions.

3.000

One client with more than 3 thousand technicians supported by digital tools to optimize operations.

CUSTOMERS USE CASE

Our approach to a new training reality: A team with higher capabilities, requiring less training

TRAINING



Increasing workers' skills to decrease training needs

The Augmented & Connected worker platform allows your team to be able to execute any task without training.

SAFETY



Real-time guidance and contextual data for a more aware worker

AR displays contextual data through a see-through allowing workers to be aware of their environment.

OPERATIONS



Leading companies to operational excellence

Safety measures ensured, evidences and analytics automatically extracted from operations lead any company to success.

TRUSTED BY

Our most notable clients & partners



TRAINING



SAFETY



OPERATIONS



SIEMENS





CASE STUDY



Case Study

Bondalti Preventive Inspections

It is the largest Portuguese group in the Chemical Industry sector, operating in two business units: Industrial Chemicals and Nanomaterials.

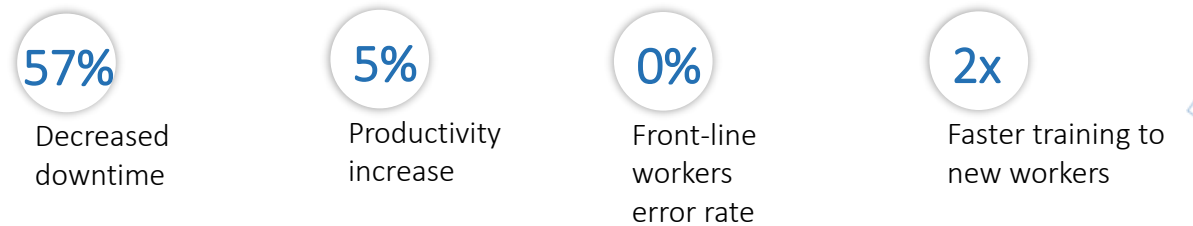
CHALLENGES

1. Paper-based inspections
2. Guidance data located far from equipment
3. No digital tools to perform inspections with hands-free
4. High risk operations due to chemical environment
5. No help when problems occur
6. Employees unreachable and have safety concerns

APPROACH

1. Digitized inspection & Integration with SAP
2. Front-line workers guidance through 2D and Augmented Reality (AR) to ensure workers safety
3. Real-time operations management and monitoring
4. Visual Remote Assistance to help employees and increase safety

RESULTS

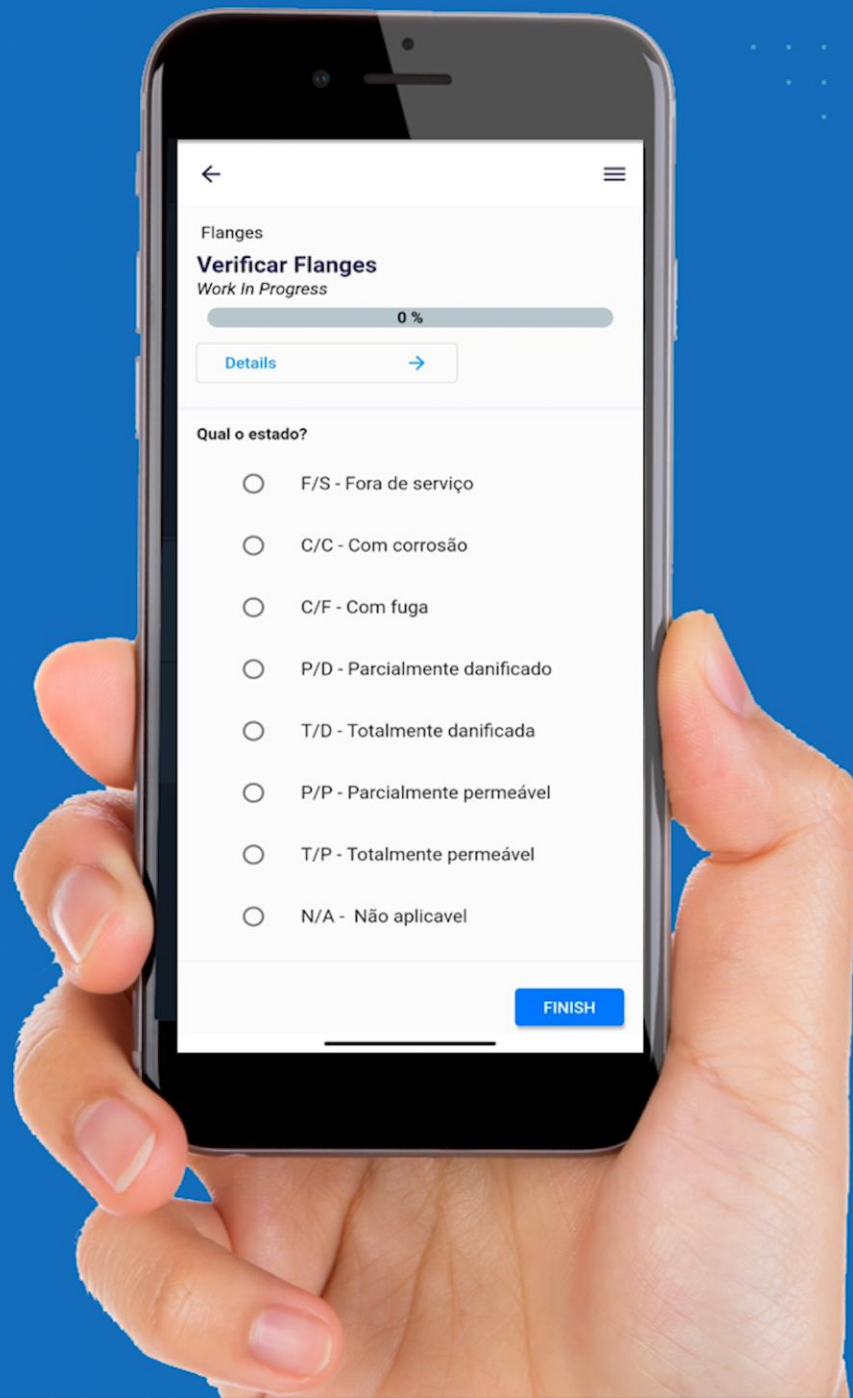


PREVENTIVE INSPECTION

From Paper to Digital with Augmented Reality



GLARTEK





OTHER USE CASES

Use Cases

Main use cases in which our solutions have a added-value



Maintenance

Preventive
Corrective
Autonomous
Predictive



Production

Work Instructions
Checklists
Changeovers
Metrics
SMEDs



Safety

LOTO
Cleaning
Routines
Accident Handling



Audits / Quality

5S
PDCA
Inspections
Behaviour
Preventive Audits



Supply Chain

Part Picking
Material Inspection
Line Supply
Waste Controls



Assistance

Problem reporting
Maintenance
Repair remote assistance
Installations/setup

Operations and Training



OUR SOLUTION

A new digital era for the chemical sector

Digital operations are the new reality to address industry and keep competitive



OPTIMIZED PRODUCTION

IIoT, advanced analytics, predictive maintenance



SUPPLY CHAIN VISIBILITY

Increased visibility of supply chain activities.



OPERATIONS REMOTE SUPPORT

Visual Remote Assistance and Digital Twins of operations.



SAFETY, COMPLIANCE, & SUSTAINABILITY

Safety profile, emissions & dangers, accurate audit trail



Our customers' lives before Glartek

Paper-based processes and inefficient frontline teams

N.º de FOP: C. U. - MORIGEN 2 | Título: Normalizado | **Folha de Operação Standard** | Pág. 112

Nome do processo: **FOSLOTO de BLOQUEIO MORI SEIKI GEN 2** (PROCEDIMENTO)

Equipamento de segurança / Proteção individual: 3 Bloqueadores + 3 cadeador + 3 Etiquetas Identificação

Tempo total: min

Data de modificação: / /

Qualificador: CUET

N.º	Etapa Principal	Zona	Ponto Chave (Razão do ponto chave)	Desenhos explicativos, Regras operacionais e outros.
1	PREDISPOSIÇÃO PARA CONDUÇÃO: Aguardar fim de ciclo da máquina			
	Pressionar em simultâneo os botões "RESET" e "ALARME CANCEL" (fig. 1)		Botões	Fig. 1
	Pressionar botão "JOG" para colocar em manual (fig. 2)		Botão	Fig. 2
	Pressionar botão "DESBLOQUEAR PALETTE" (fig. 3)		Botão	Fig. 3
	Pressionar botão "ABRIR PORTA" (fig. 4)		Botão	Fig. 4
	Abre portais (lateral e/ou frontal e/ou do lado) "CHAVE DE BLOQUEIO" das (s) portais (s) previamente abertais. (fig. 7)		Em função da necessidade	Fig. 7
	Retirar e guardar "CHAVE DE BLOQUEIO" das (s) portais (s) previamente abertais. (fig. 7)			
2	PREDISPOSIÇÃO PARA INTERVENÇÃO: Executar ponto 1		Ponto 1 executado a 100%	
2.1	BLOQUEIO MECÂNICO DO EIXO Y: Executar procedimento específico p/ sustentação mecânica do Eixo Y		NOTA 4 consultar manual Manutenção	
2.2	Pressionar botão "PARAGEM GR. HIDRÁULICO" (fig. 5)		Botão	Fig. 5
Outras informações pertinentes:				
NOTA 1: O controlo visual das pressões dos manómetros e tacção dos volímetros efectuam-se apontando com o dedo em cada valor				
NOTA 2: Se existirem empresas do exterior envolvidas na intervenção, cada uma deve obrigatoriamente ceder o recetorador 400V, após o caducamento do técnico de manutenção				
NOTA 3: No caso de intervenção na máquina que não atinja ao Eixo Y e respetiva zona abrangidas, não considerar o passo 2.1 e passar diretamente do passo 2 para o passo 3.2				
O que é interdito e porquê?				
É interdito intervir no Eixo Y sem colocação da preguça mecânica de sustentação e cumprimento do procedimento de manutenção do Eixo Y, existindo o risco de descolamento súbito do Eixo em questão				
3	CHECK FINAL: Pressionar o botão "POWER ON" (fig. 1)		Nada se deve alterar mecânica, elétrica e fluidicamente no comportamento da máquina	
Outras informações pertinentes:				
NOTA 1: O controlo visual das pressões dos manómetros e tacção dos volímetros efectuam-se apontando com o dedo em cada valor				
NOTA 2: Se após o Lockout o valor verificado não estiver a Zero, não intervir e alertar o responsável Hierárquico				
NOTA 3: Se existirem empresas do exterior envolvidas na intervenção, cada uma deve obrigatoriamente ceder o recetorador 400V, após o caducamento do técnico de manutenção				
O que é interdito e porquê?				
É interdito intervir no Eixo Y sem colocação da preguça mecânica de sustentação e cumprimento do procedimento de manutenção do Eixo Y, existindo o risco de descolamento súbito do Eixo em questão				

Paper-based processes

All operations checklists and support guides are specified in paper sheets, often far away from the execution place.

Long training

Not aligned with company values, with low morale, no communication, no recognition and no training.

Increased risk

Human errors, missing tools and outdated information for an efficient and safe operation with no reputation risk.

The solution

A more efficient and safe team supported by Digital tools

Augmented & Connected Worker

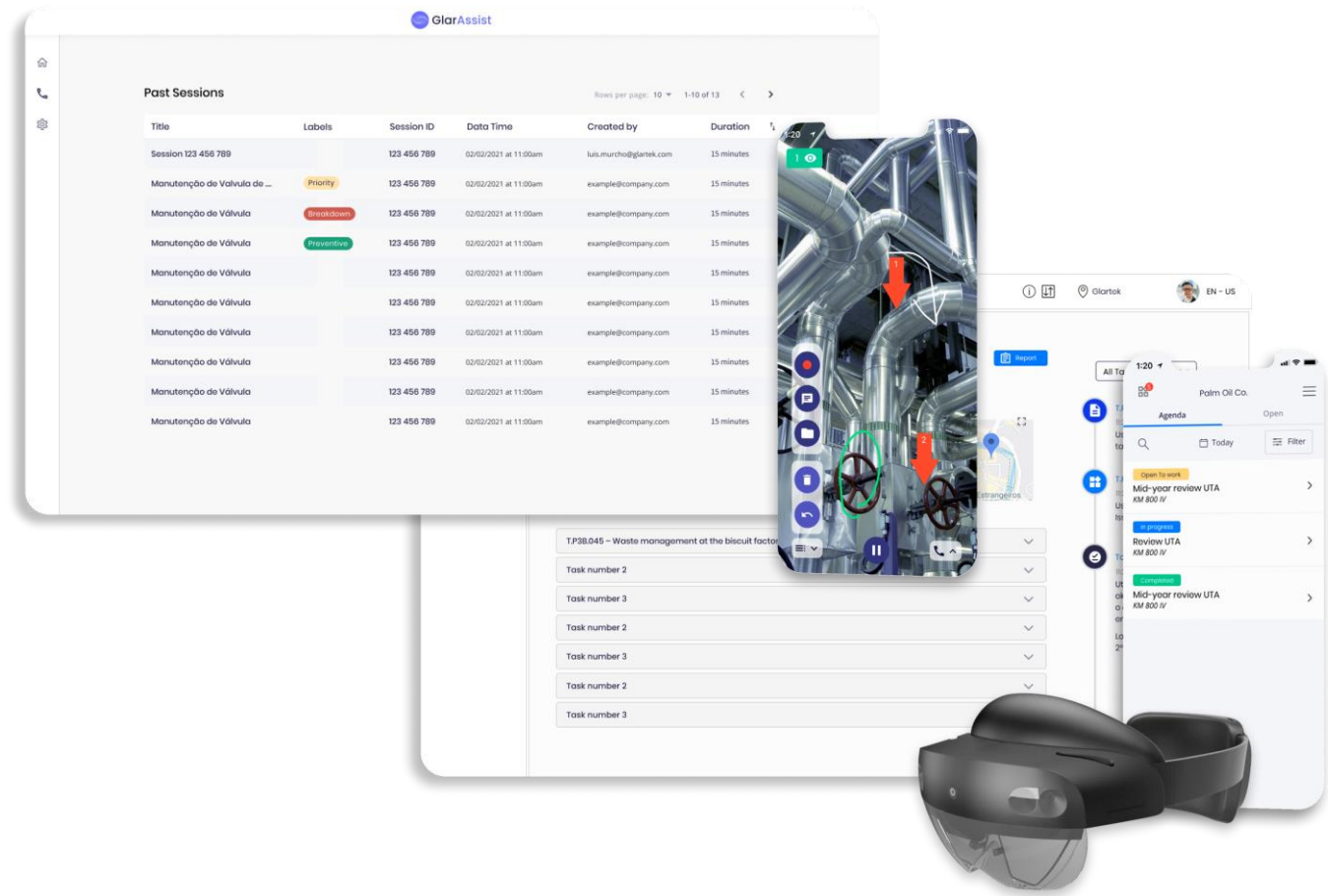
Digital processes enabling 2D and Augmented Reality (AR) mobility, with customizable workflows and checklists

Visual Remote Assistance

Hands-free video calling with experts to guide a process execution, highlighting objects with live annotations

Operational Excellence

An augmented and connected frontline team, and managers, supported by industry leading digital tools.



Characteristics of the software

Making chemical leaders daily lives safer with no code, customizable digitalization platform



NO CODE

A digitalization platform that does not require any programmer to maintain it.



CUSTOMIZATION

A customizable workflow design system that can be adapted to any need.



DATA COMPLIANCE

Secure and easy to collect, use, store and manage data.



FAST DEPLOYMENT

We work with on-premises deployment to ensure maximum adaptability.



SAFETY & SECURITY

The app enables a safety-first environment for your team.



CYBER-SECURITY

Compliant with the most relevant data security certifications, such as ISO 27001.



Customer Proof Points

A new way digital strategy to thrive in the Industry

3%

Production Increase

Automotive manufacturer increased parts output and increase efficiency.

25%

Fewer People

Utilities company reduced number of technicians and shadowing.

Zero

Error Rate

Paper & Pulp company guaranteed full compliance and error free safety tasks.

2x

Faster Training

Food & Beverage company trained faster compared to traditional methods.

20%

Fewer Unplanned Trips

Field services company reduce field dispatches and on-site assistances.

80%

Full Payback in First Year

Most customers have positive ROI in less than one year.



GLARTEK

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