GIS and Augmented Reality to boost field activities and improve work safety

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Overit

Overit 20 years of experience in Field Service and innovation

Field Service

Planning, optimization and monitoring of activities on the field or in production plants

GIS

Advanced integration with Geographic Informational Systems (GIS)

Augmented, Mixed, Virtual Reality

Disruptive solutions using cutting-edge technologies

Augmented, Mixed, Virtual Reality: what are they?

Augmented Reality

Overlapping of textual, graphic and multimedia information to the world observed by the user

Mixed Reality

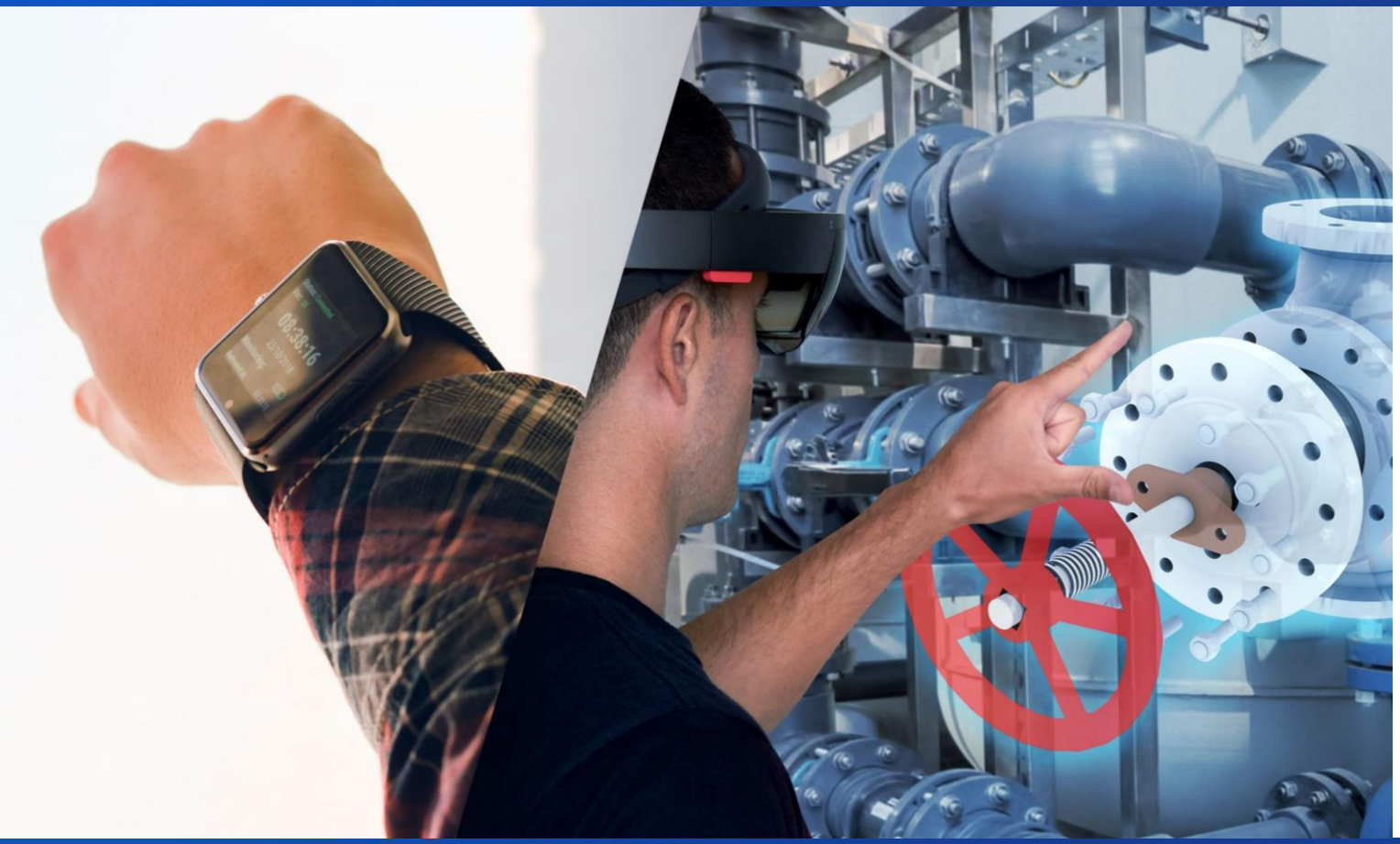
Integration of digital objects into the physical world. It enables users to interact with the artificial objects displayed within their field of vision

Virtual Reality

It provides an artificial environment where VR users immerse themselves and interact with multimedia content

Three technologies transforming the way people interact with the physical world, bringing user experience to a whole new level

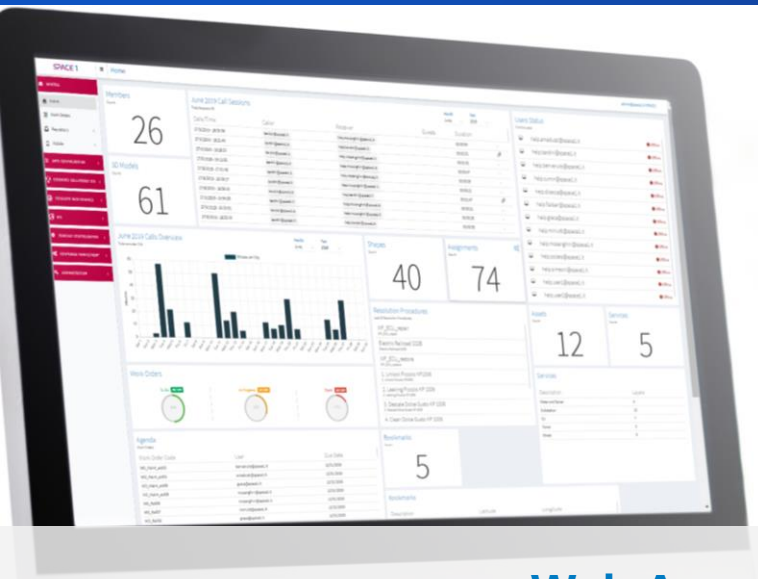
Wearable technologies & AR solutions

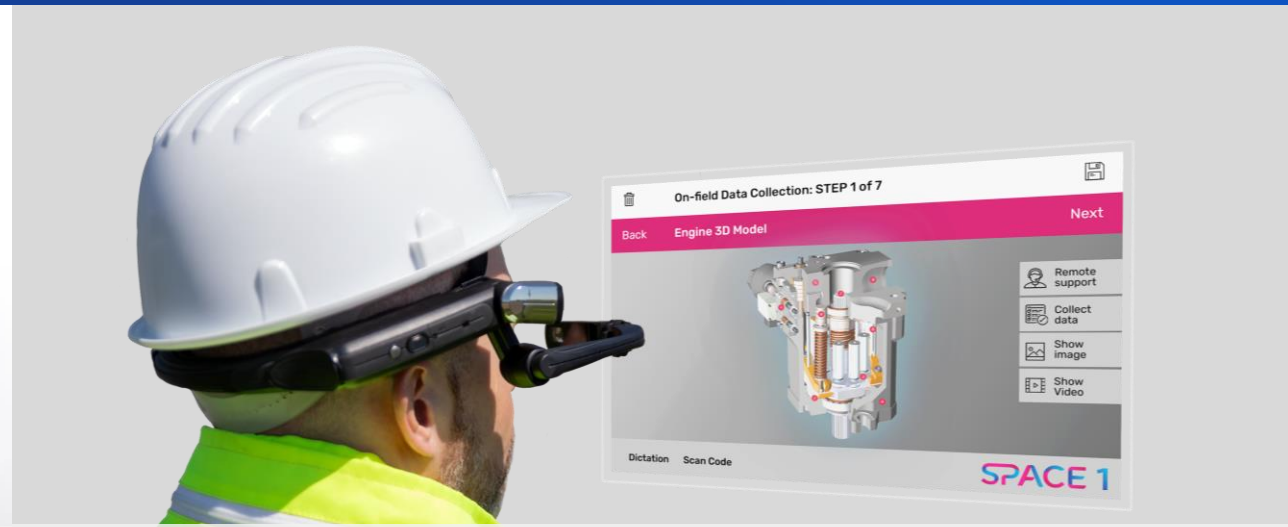


> “By 2020, more than 75% of Field Service organizations with over 50 users will deploy mobile apps that go beyond simplified data collection and add capabilities that help technicians succeed.
>
> Wearables and immersive technologies will play an important role across training, production and service delivery. ”

Gartner

SPACE 1 Product Overview





Web App

- Administration (users, roles, permissions)
- Authoring tool (3D models)
- Workflow manager
- Virtual scenes editor
- Analytics
- Remote expert guidance suite

Client side App

- Hands-free workflows' execution
- Receive / Provide remote support
- Visualize content, real-time data (IoT)
- Debrief in mobility (vocal commands)
- Get training
- Collaborate over products / procedures

SPACE 1 Available on multiple Head-mounted Displays

Augmented Reality

RealWear HMT-1

Epson Moverio BT-350

Vuzix M300

Tablet

Smartphone

Mixed Reality

Microsoft HoloLens

Microsoft HoloLens 2

ThirdEye

Daqri Smart Glass

Vuzix Blade AR

Virtual Reality

HTC Vive

Samsung Gear

Partnerships

Microsoft Partner | Mixed Reality

realwear™

SPACE 1 Extended Field Solution – Application areas

Extended Collaboration

Broadening field working modalities and creating a cooperative virtual environment, as to support the quality standards and expertise provided by the operators involved

Extended Maintenance

Supporting field technicians in their daily tasks to enhance quality, efficacy and safety standards, while sharing the company know-how

Extended Training

Introducing a new dimension to training activities, providing innovative, safe and cooperative training sessions

SPACE 1 Extended Collaboration

It expands the concept of collaboration between users, introducing innovative ways of working

- Real-time content sharing and manipulation, with multiple users
- Advanced toolbox for annotations
- Multimedia and virtual content sharing
- Tracking of the tasks performed and knowledge creation

Increase in first-time fix rate

Improve in remote resolution rate

Enhance in technicians' productivity

SPACE 1 Extended Training

It makes possible to conduct training sessions both in Mixed and Virtual Reality

MIXED REALITY

- Remote presentation, by involving the attendees, and using virtual objects
- Interaction among remote users, allowing them to increase their product knowledge
- Mentor-attendee roles-ready

VIRTUAL REALITY

- Selection of multiple scenes based on the recognized asset
- 3D scene editor
- Navigable Resolution Procedures
- Actions based on 3D models

Increase in trainee satisfaction

Savings in training costs

Reduction in learning time

SPACE 1 Extended Maintenance

It improves quality assurance and enables field technicians to complete tasks quicker

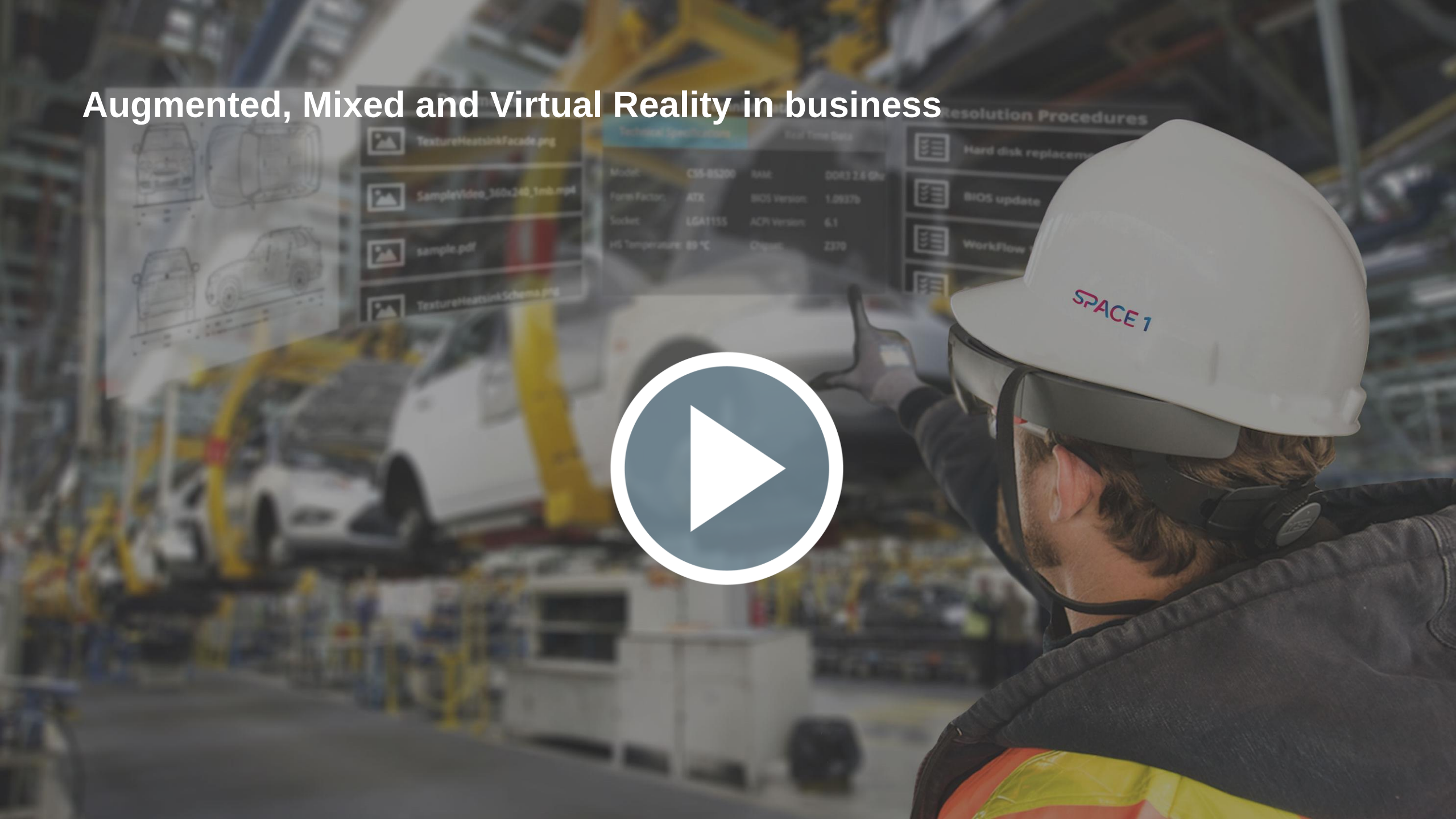
- Configurable Workflows
- Step-by-step interactive procedures
- 3D and Holographic objects and multimedia content
- Online and offline capabilities
- Vocal hands-free debriefing

Improve in efficiency

Decrease in mistakes

Reduction in injuries at work

Augmented, Mixed and Virtual Reality in business



SPACE 1 Extended Maintenance – GIS

The union between GIS and “virtual” allows the user to visualize spatial data in the real world, which is enriched with information otherwise invisible

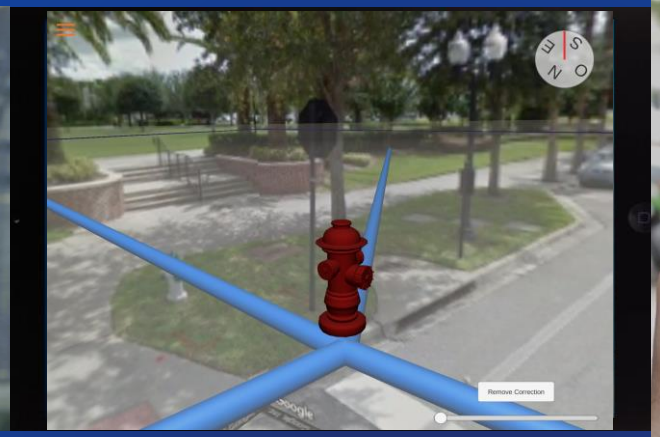
- Realistic 3D visualization of geospatial data
- Visualization of hidden assets
- Impact assessment before creating new plants and networks
- Reduction of time to identify on-field assets

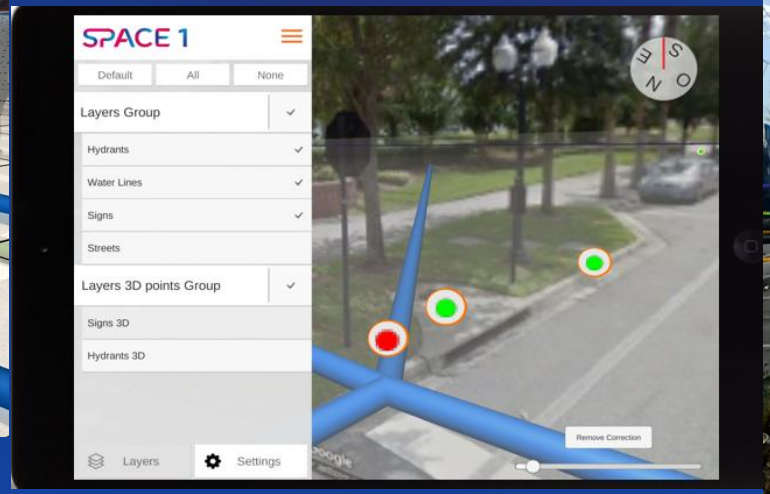
Full integration with the market-leading GIS

High and easy configuration of assets’ graphic visualization

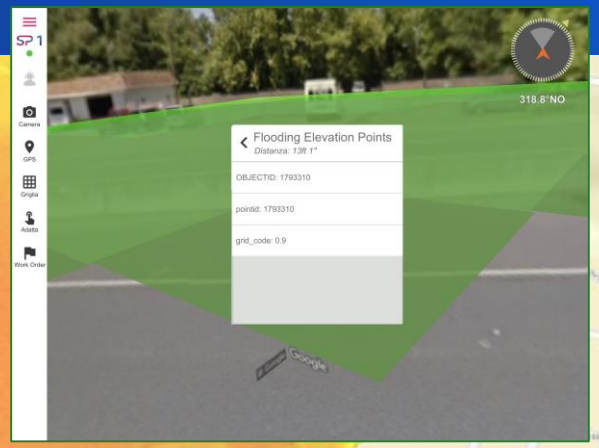
Dynamic presentation of content, with tracking and positioning features

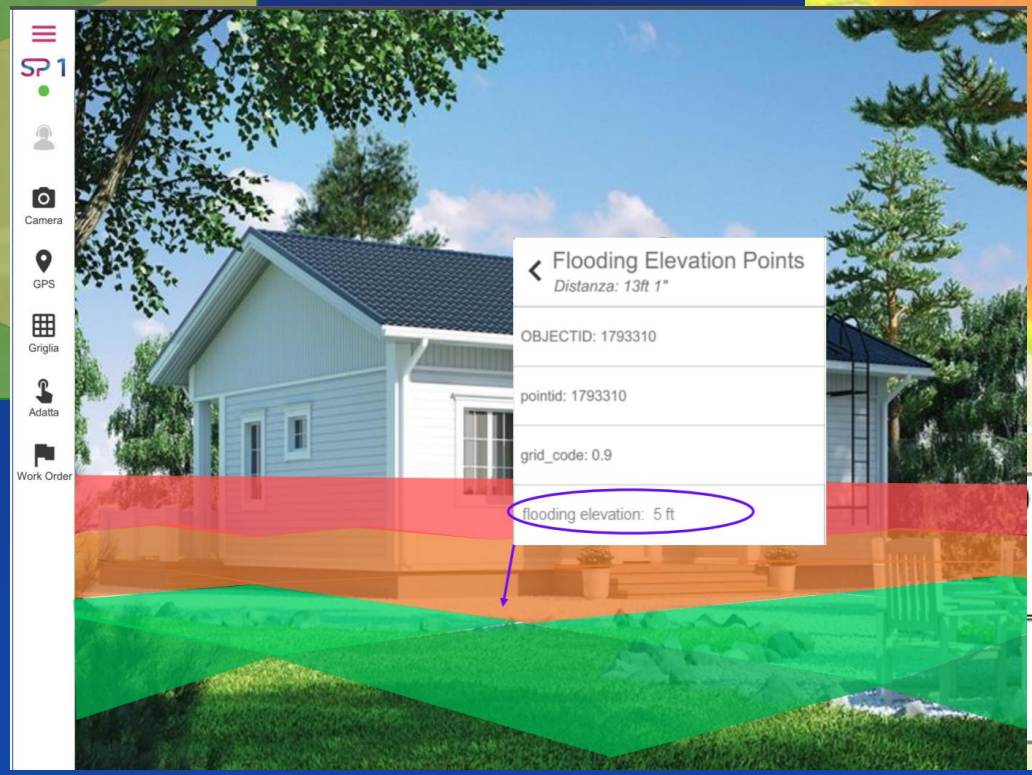
SPACE 1 Extended Maintenance – GIS





SPACE 1 Flooding POC





Support to pipelines inspection

Use of Augmented Reality to support the operational processes performed on the field by the maintenance teams

One of Europe's main natural gas infrastructure companies, leading in gas transport and storage

- Visualization of networks and assets
- Technical information on assets
- Tracking and positioning
- Dynamic and parametric adjustment of contents
- Integration with the company’s Field Service and GIS solutions

Support to pipelines inspection

Real time monitoring for strategic mining

Reshaping the mine planning process by centralizing data into an interactive and stunningly visual MR experience

- Remote sharing of an interactive and up-to-date geological mine hologram
- Complex geological analysis to better highlight and identify areas at risk of collapse
- Real time visualization of truck loadings, thanks to IoT integration
- Multi-level holograms allowing to deeply visualize a subset of mines and their associated data
- Vehicles tracing, to identify the best routing strategy

Real time monitoring for strategic mining

Mixed Reality and GIS for installation design

“Smart Construction” provides the users with virtual support while planning and designing installations

- Virtual navigation of installations
- Virtual Collaboration between the field technician and the operations center
- Real-time update of 3D models
- GIS 4.0
- Available offline

Mixed Reality and GIS for installation design

National Grid – KSA Case Khatib & Alami

Overit

KHATIB & ALAMI

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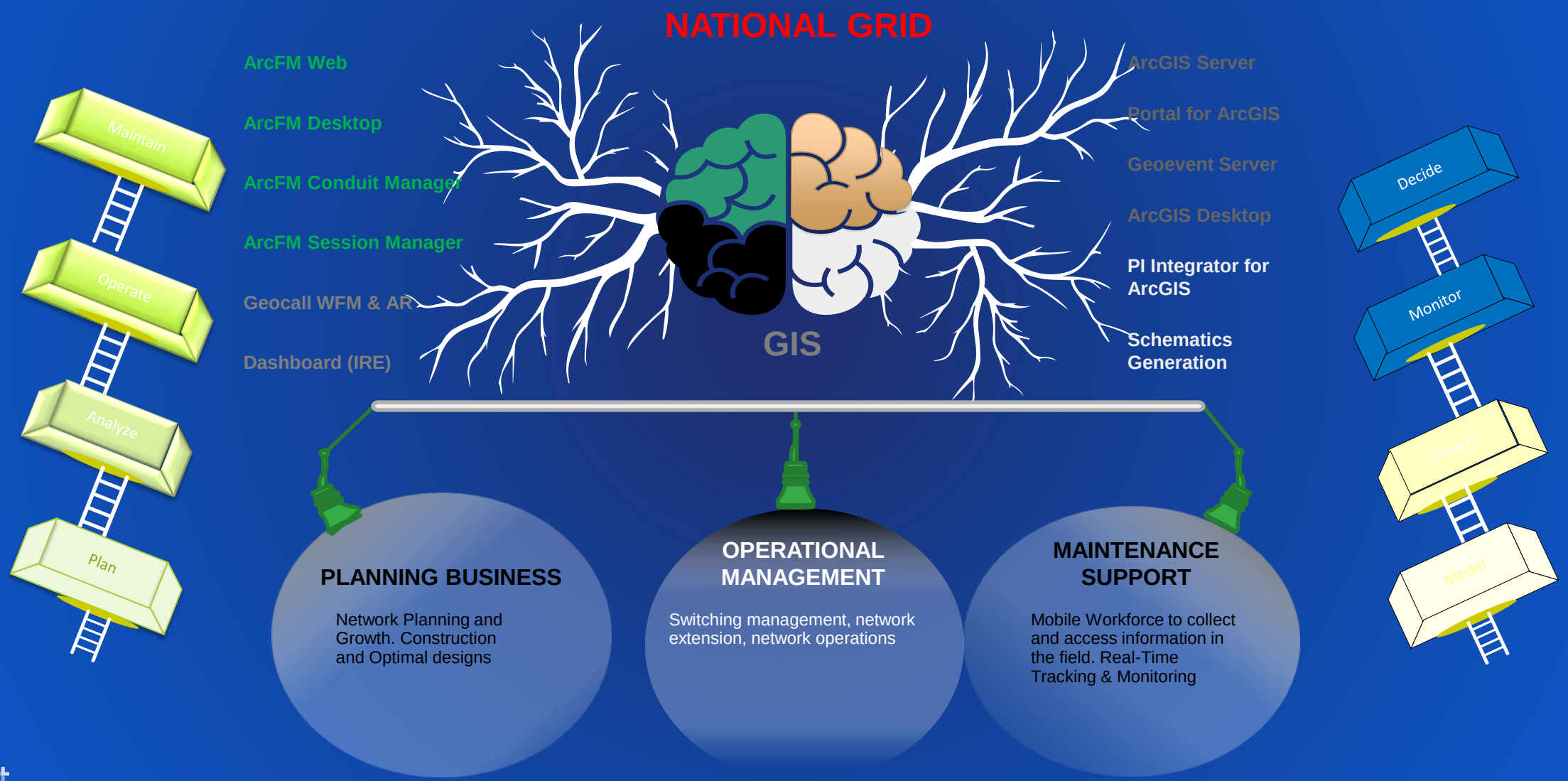
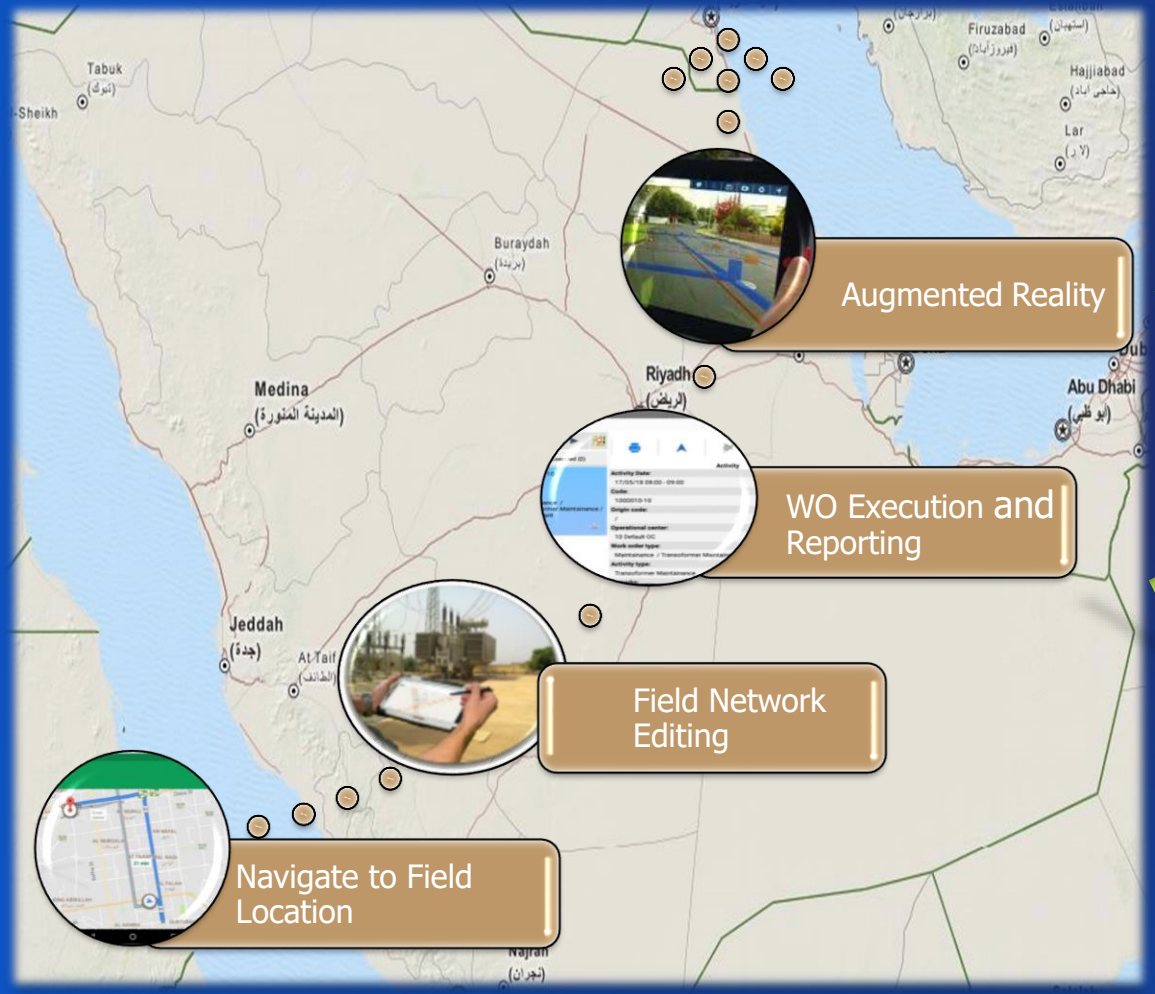
TO EXCELLENCE

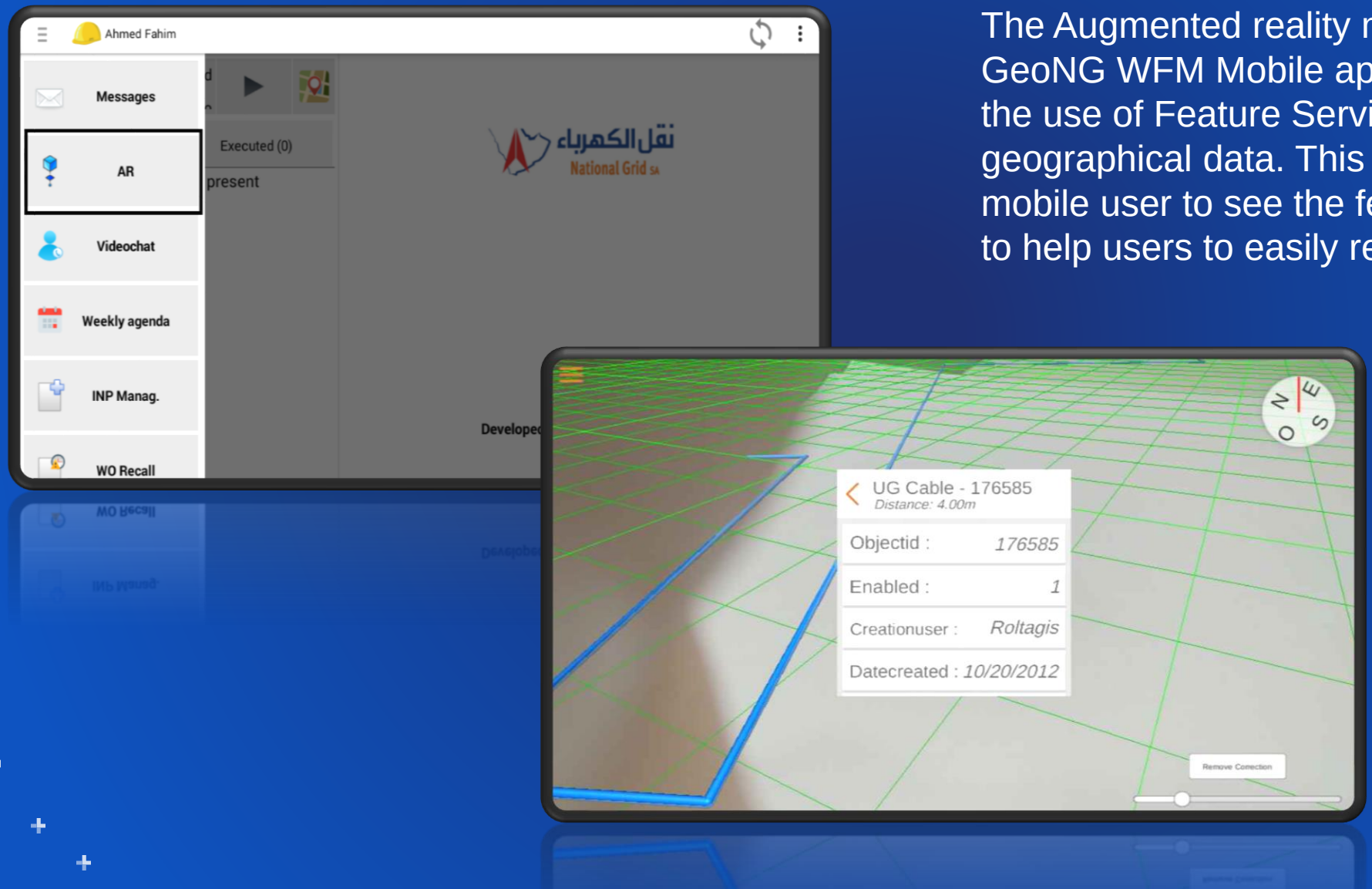
NG GIS – A single version of truth



Mobile Workforce Management



Augmented Reality at National Grid



The Augmented reality module available in the GeoNG WFM Mobile application is based on the use of Feature Service to display and query geographical data. This module enables the mobile user to see the features as real objects to help users to easily reach their targets.

AR supporting maintenance

Use of Augmented Reality at National Grid to support the operational processes performed on the field by the maintenance teams

A Saudi electric utility company, operating in generation, transmission and distribution of electric power in Saudi Arabia

- Visualization of networks and assets
- Technical information on assets
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- Dynamic and parametric adjustment of contents
- Integration with the company’s Field Service and GIS solutions

Thanks for your attention

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