The Future of Affordable, Greener, High-Performing Wi-Fi
Sedian Day 2019
In 2016, mobile technologies and services generated 4.4% of GDP globally, equivalent to $3.3 trillion.

10 billion WiFi devices currently in use in the world

3 billion WiFi devices shipments in 2017

Public WiFi Hotspots will grow 7x by 2020 hitting 432.5 million

More WiFi devices in use as there are people on earth
Main WiFi Challenges

Limited Spectrum
High interference levels
Maximize Wireless Performance and Efficiency
CHT SW converts WiFi APs into Cognitive APs

Measure > Collaborate > Optimize
A fully distributed controlled network

- No Central Controller Required
- No Single Point of Failure
- No Delay in the Decision-Making
- No Bottleneck in the Communication
- Highly Scalable
- Save Money
- Simplify Installation
WITHOUT CHT

- **More APs** required
- **High** interference levels
- **Poor** user experience
Cognitive Hotspot™ Technology

WITH CHT

✓ Collaboration Between APs
✓ Cleaner RF Environment
✓ Optimized performance
Cognitive Hotspot™ Technology

WITHOUT CHT

WITH CHT
Cognitive Hotspot™ Technology

WITHOUT CHT

WITH CHT

Cognitive Hotspot™ Technology
Galgus Software Benefits

Optimization

- Automatic Channel Assignment
- Load Balancing
- Pre-Balancing
- Airtime Fairness
- Multicast-Unicast Conversion
- Automatic Power Control
- Smart Roaming
- Predictive Roaming
- Traffic Congestion Management
- Ultra-High Density Scenarios: Dynamic Probing Frames Management
# Galgus Software Benefits

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<tr>
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<td>Captive Portal and Integration with Social Login</td>
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<td>Smart Roaming</td>
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<td>Predictive Roaming</td>
<td>WPA Enterprise with Radius Support</td>
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<td>Traffic Congestion Management</td>
<td>Modular Licenses and Auto-Download Licensing System</td>
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<td>Ultra-High Density Scenarios: Dynamic Probing Frames Management</td>
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# Galgus Software Benefits

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<th>Analytics</th>
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<td>Automatic Channel Assignment</td>
<td>Remote Management (Cloud)</td>
<td>Wireless Intrusion Detection</td>
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<td>Load Balancing</td>
<td>REST API</td>
<td>Wireless Intrusion Prevention</td>
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<td>Pre-Balancing</td>
<td>Self-configuration</td>
<td>Wireless Intrusion Location*</td>
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<td>Airtime Fairness</td>
<td>Advanced Mesh with Self-Healing, Dynamic Re-Routing, QoS and Power Control</td>
<td>Location, Positioning and Tracking of devices with real or randomized MAC</td>
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<td>Multicast-Unicast Conversion</td>
<td>Zero Touch Provisioning</td>
<td>Real-time Signal Strength Heatmap</td>
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<td>Automatic Power Control</td>
<td>Captive Portal and Integration with Social Login</td>
<td>Unveiling of Randomized MAC Addresses</td>
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<td>Smart Roaming</td>
<td>Dynamic VLANs</td>
<td>Discovery of IEEE 802.11 Amendments Supported by User Devices</td>
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</table>
Indoor Positioning

- Already Deployed Infrastructure
- Hybrid Solutions
- Robustness, Accuracy

- Transparent to clients
- Fast and Reliable
- Analytics, Security, Surveillance
Automatic Heatmap
Security: WIDS, WIPS and Intrusion Location

![Diagram showing security technology](image-url)
Infrastructure Cost Savings up to $80%
Energy Savings up to 70%
Cognitive Hotspot Technology

400,000 sqf outdoor areas WiFi coverage even at the beach!
Cognitive Hotspot Technology

Capacity 3,000 people

Covered by 18 APs with CHT

Over 100 events celebrated every year
Cognitive Hotspot Technology

Pilot in London
Demonstrated
3x times higher WIFI
average performance
per passenger

Pilot in US
Successful live test
Trip Washington
to New York
Cognitive Hotspot Technology

Cruise Ships

3 Cruiseships In the Mediterranean Sea
Cognitive Hotspot Technology

600+ Buses Worldwide equipped with Galgus SW
Real Betis Stadium
55,000 People
Covered all the press areas, Row 0 and VIP areas, and Offices with 90 APs.
Galgus team

38 Direct Employees

7 External Advisors

30 Telecom Engineers
Galgus funded by the European Commission with a SME Instrument Phase II in 2018
1.4M€ Funding

1,658 Proposals submitted

696 Proposals above-threshold

130 Proposals pitching in Brussels

63 PROJECTS FUNDED
Company awards

EIT DIGITAL CHALLENGE
Named Europe’s best digital infrastructure scaleup
50k€ Cash Prize

2016

INFLIGHT INNOVATION AWARD
Awarded for the best technology innovation in commercial aviation.
Dubai, 22nd of February 2015

ENTREPRENEUR XXI AWARD
Awarded to the most innovative company with the highest growth potential
Seville, 15th of June 2015

EXPORT AWARD
Awarded as the company with the highest export ratio in Andalusia-Spain
Spain, July 2015

WIFI-NOW AWARDS
Best WiFi Startup Category.
The Hague, Holland, 31st October 2017
WINNER
1st
WIRELESS BROADBAND ALLIANCE INDUSTRY AWARDS
Awarded for the best Industrial Wireless Service Innovation Category
New York City, USA
15th November 2017
Operational Performance Innovation of the Year

Galgus

WINNER
1
1st
Smartrail World Innovation Awards

Awarded for the "Operational Performance Innovation of the Year" Category

Amsterdam, Holland
17th April 2018
Cognitive Hotspot Technology

1st
WINNER

SMARTRAIL WORLD INNOVATION AWARDS

Awarded as the “Best In-Flight Connectivity Innovation"

Los Angeles, USA
10th Sep 2019
## Galgus Benefits

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<tr>
<td><strong>Enhance Customer Experience</strong></td>
<td>Speed up your Wi-Fi experience by 5x.</td>
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<td><strong>Easy to Deploy - SW</strong></td>
<td>Easy to deploy software.</td>
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<td><strong>Multi-Vendor</strong></td>
<td>10+ OEMs partners worldwide.</td>
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<td><strong>In all Vertical Markets</strong></td>
<td>Available in all vertical markets.</td>
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<tr>
<td><strong>Disruptive Business Model</strong></td>
<td>Android versus Apple Analogy.</td>
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<td><strong>Significant Traction</strong></td>
<td>10+ OEMs customers worldwide.</td>
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<td><strong>Sustainable technology advantage</strong></td>
<td>3 global patents and 2 more under preparation.</td>
</tr>
<tr>
<td><strong>Self-Funded</strong></td>
<td>Profitable since 2013. Organic growth. 80% international revenue. Strong team and technology.</td>
</tr>
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Affordable, High-Performing Wi-Fi SW for every Vertical Market
Thanks

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facebook.com/GalgusCHT/
twitter.com/galgus_
linkedin.com/company/galgus