



CaPow

Wireless Power Ecosystem

Enabling the Automation of the Future

THE PROBLEM: WAREHOUSE AUTOMATION BATTERY IMPLICATIONS

**Up to 50% of
robot fleet cost**

**25% of robot cost
25% added fleet size**

**Li-ion is a Major
Safety Issue**

**3 warehouse fires
caused damages over
\$200M**



THE SOLUTION: WIRELESS POWER ECOSYSTEM

1.

**Completely eliminates
batteries**

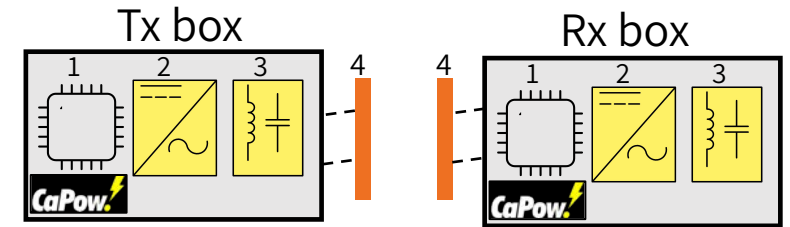
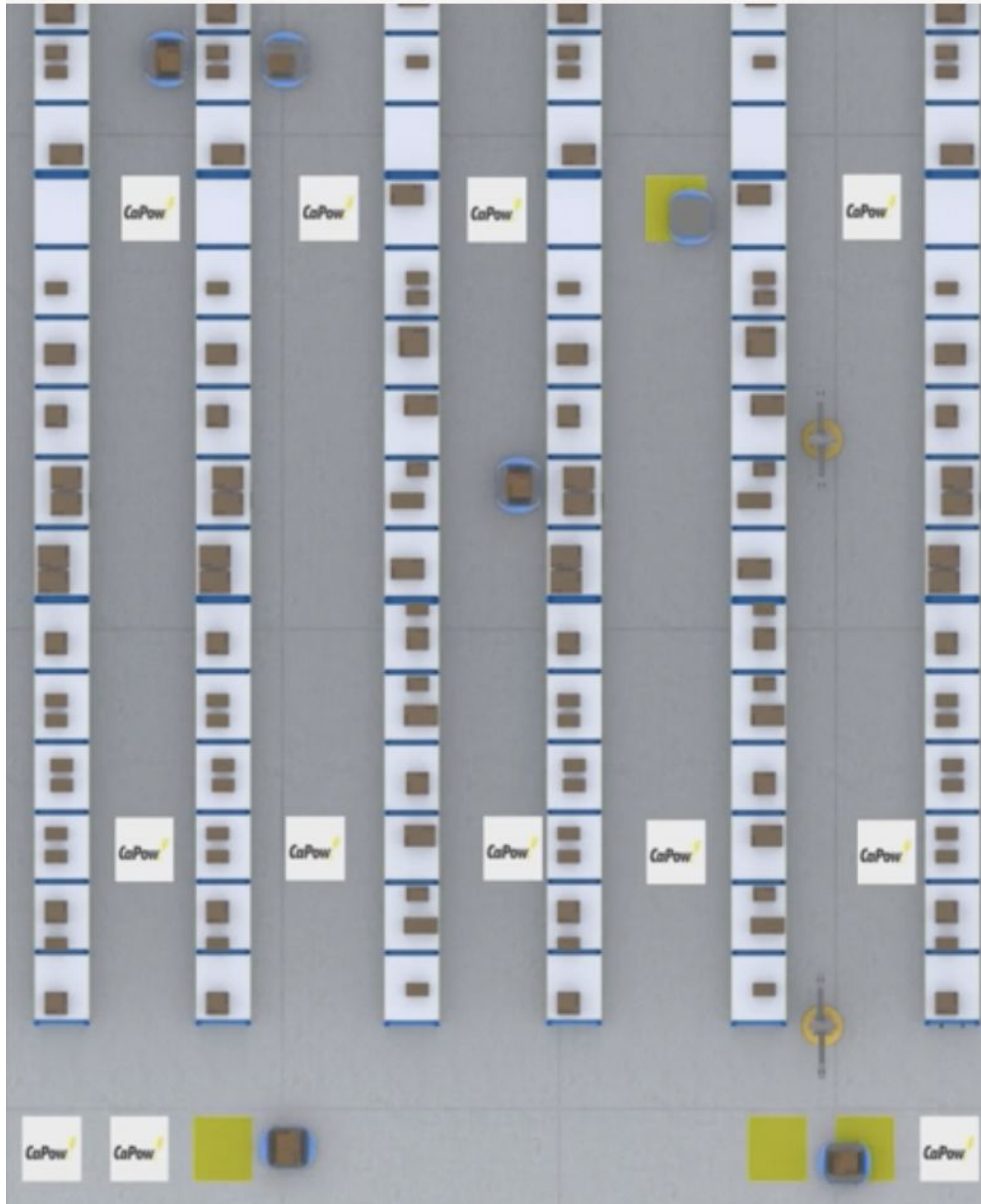
2.

**Increase warehouse
automation ROI by up
to 25%**

3.

No safety concerns

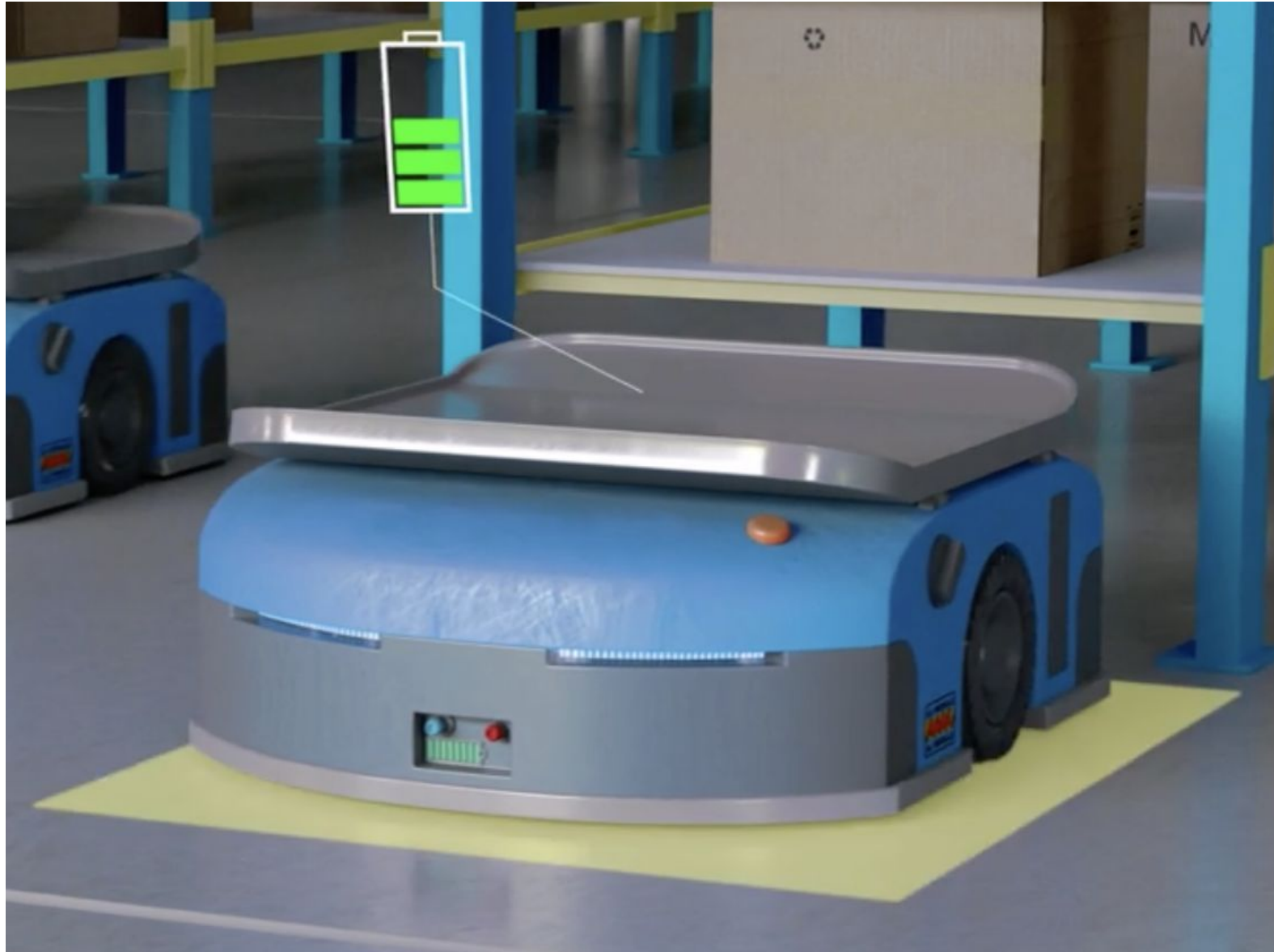
CAPOW'S SOLUTION



- 1- Proprietary ASIC
- 2- Power module
- 3- Tuning network
- 4- Antenna



ROBOT CHARGING STICKERS



WHERE OTHERS STRUGGLE, WE THRIVE

Issue	Qi	Magnetic Resonance	CaPow
Misalignment (x-y)	• Poor	• Poor	• Flexible – Full surface coverage
Power transfer with respect to Z axis	• At mm range only	• At few cm only within perimeter	• Full power up to 10cm
Efficiency (DC-DC)	• 50-70%	• 70-80%	• +85% up to 10cm
Thermal issues	• Overheating. Hazard caution (+30-40°C)	• Severe increase at target dT (+20-30°C)	• Medium never affected
Metal in field	• Not allowed(!) severe constraint	• Highly not recommended – Performance drop	• Allowed • Accommodating shield
Safety	• Allowed with specific protection	• Allowed with specific protection	• Non radiative electric field
Interference	• Mandatory shielding.	• Mandatory shielding	• Fully compatible with FCC and CISPR

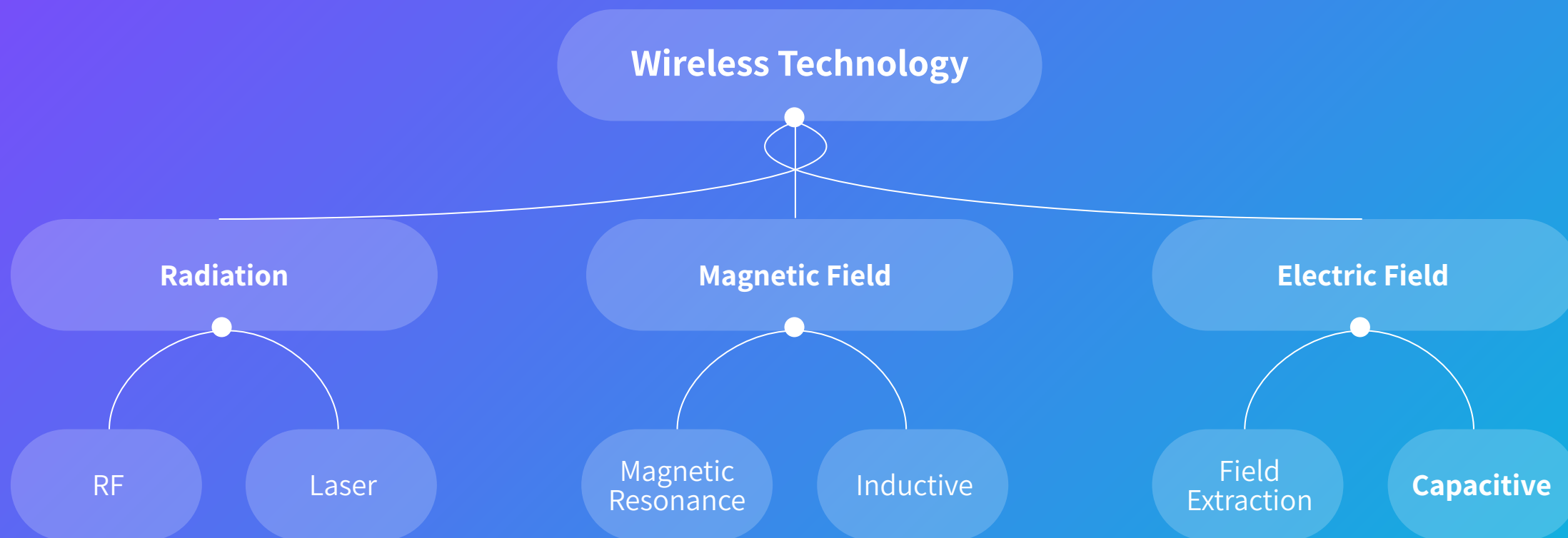


Carried out as part of extensive DD with market leader company



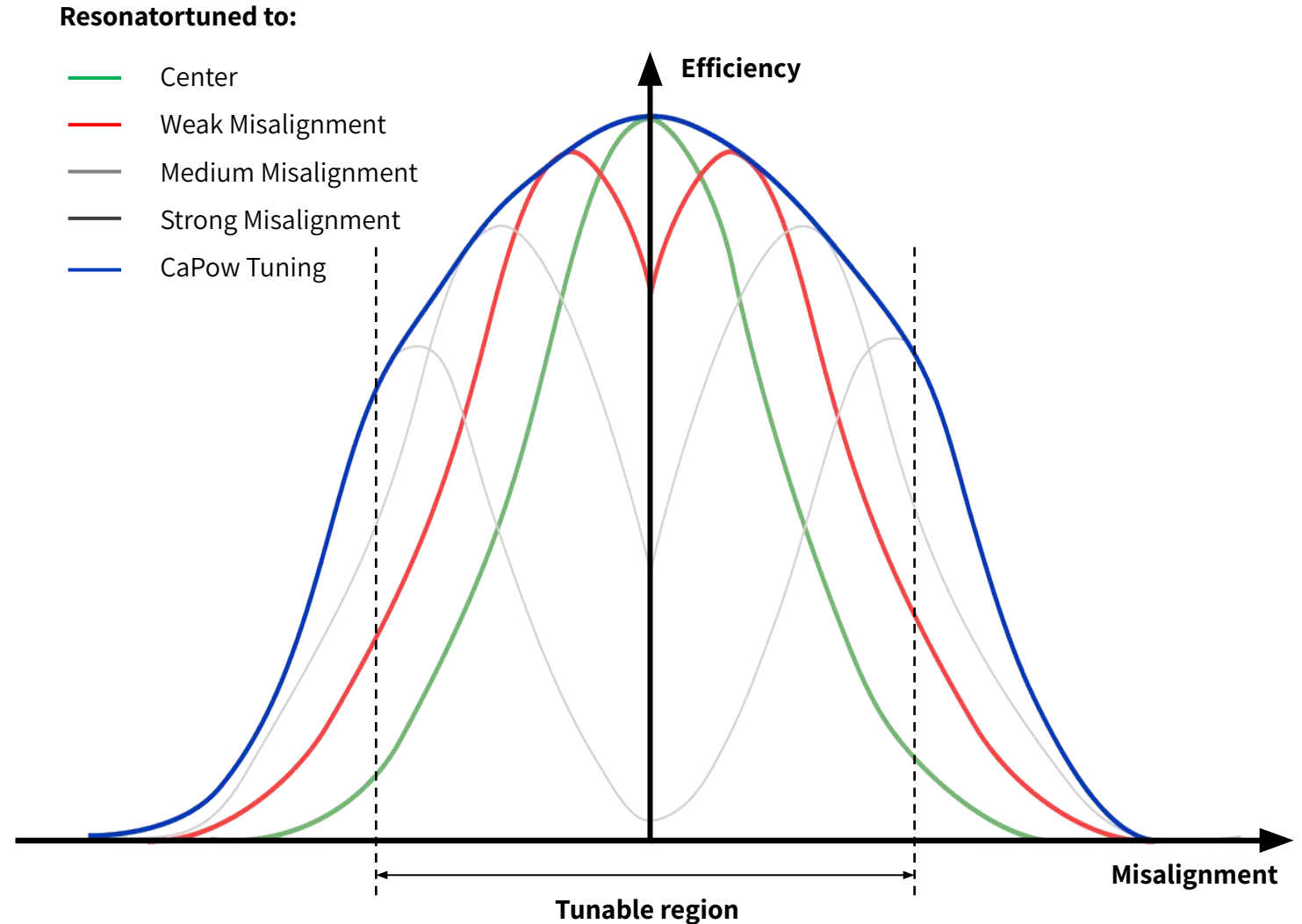
Comparison based on application for medium power level (consumer electronics)

TECHNOLOGIES FOR WIRELESS POWER DELIVERY



OUR TECH

- ✓ Wireless power transfer over **capacitive** medium
- ✓ Adaptive **lock-in** technology
- ✓ Unique **asynchronous** IP-based **SoC** ASIC
- ✓ **Patented** Auto-tuning configuration & mechanism
- ✓ **Optimal** transfer conditions



WE SUCCEED WHERE OTHERS FAIL



Power levels and
range requirements



Overcome
metal frames



Support of multiple
clients simultaneously



Dynamic wireless
power

COMPANY OVERVIEW

❑ Company:

- ❑ Founded in October 2018. **HQ in Israel, Beer-Sheva.**
- ❑ “Bootstrapped” to mature the technology. Technology matured with **customer sales.**

❑ Technology:

- ❑ Technology based on **10+ years of research** by Prof. Mor M. Peretz and team at BGU
- ❑ World leading **capacitive wireless power ecosystem** based on proprietary **ASIC**
- ❑ Unique capabilities due to **adaptive lock-in** technology:
 - ❑ **Dynamic** movement support
 - ❑ Accommodate **large X-Y misalignments.**
 - ❑ Accommodate various materials in the field, **including metals.**
 - ❑ Best in-class **end-to-end system efficiency**

OUR TEAM



Amir Fishelov

Chairman

- ✓ **Co-Founder** of SolarEdge. (S&P 500 listed)
- ✓ **VP of Strategy:** Planning SolarEdge strategic roadmap – Key customer partnerships, M&As and product roadmap.
- ✓ **VP Software & System:** Managed and built a group of over 300 engineers spanning from hardware to cloud software.
- ✓ Management and technical positions in **the elite technological unit of the Intelligence Corps** of the Israel Defense Forces
- ✓ **20+ years experience** in development and management from small scale organizations to large scale



Prof. Mor M. Peretz

CEO

- ✓ **Prof. of Electronics and Energy management** from BGU. Post-doc in University of Toronto
- ✓ **Founder of the largest** and most prominent research group of power electronics in Israel, \$10M+ in funding
- ✓ **Recognized worldwide authority** of power electronics and hardware miniaturization
- ✓ **15+ years experience** in product development and innovation
- ✓ **20+ patents licensed** to global companies
- ✓ **200+ top-tier** publications

OUR TEAM



Eli Abramov, PhD

VP R&D

- ✓ **PhD in ECE** from BGU
- ✓ Over **20 IC tape-outs**
- ✓ Specialized in hardware development, in particular **ASIC for power management**
- ✓ Transferred technology from **R&D to product with global companies**
- ✓ **30+ publications** ; inventor of patents



Alon Cervera, PhD

Chief Scientist

- ✓ **PhD in ECE** from BGU
- ✓ **Innovator and creator** of several patents and licensed products
- ✓ **10+ years** of hardware and product development
- ✓ **30+ publications**
- ✓ **Next generation** optimization group leader at SolarEdge



Ofir Ganani

HLS BD

- ✓ **Colonel** (ret.| active res.) Israeli Air Force
- ✓ **Apache pilot** and squadron commander
- ✓ **Head of innovation** at Israel Defense Forces HQ
- ✓ **Leader of innovation** group at Israel Aerospace Industries



ALWAYS ON
ALWAYS CONNECTED
ALWAYS ACCESSIBLE