



Counter-Drone Solutions for Urban Environments

Yaniv Benbenisti
President & Chief Product Officer

WE LOVE DRONES



DRONES WILL CHANGE OUR LIVES



Delivery



Agriculture



Construction



THE DRONE USERS



The Good

Good users and
good usage



The Bad

Careless users and
accidently bad usage



The Ugly

Terror & Crime



THE BAD – CARELESS USERS



USA

Drones keep entering no-fly zones over Washington, raising security concerns



Italy

World champion skier almost hit by camera drone



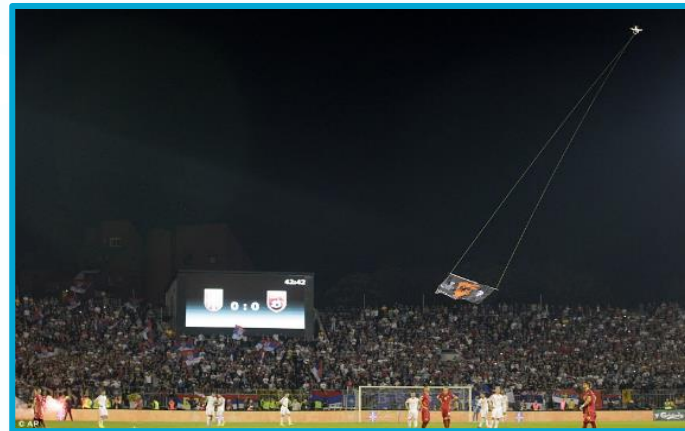
Germany

Drone crashed in front of Chancellor Merkel



UK

Drone put 130 lives at risk after near miss with plane approaching Gatwick



Serbia

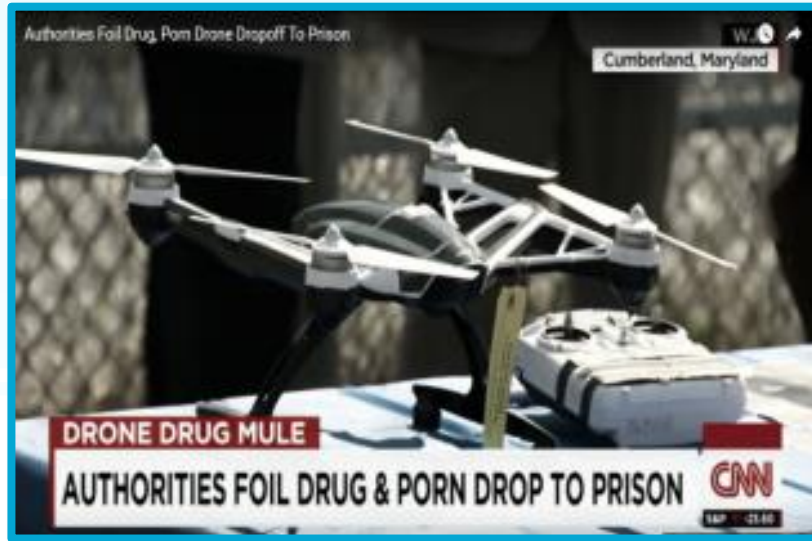
Drone interrupts Serbia vs Albania football game



US

Small drone crashes near White House despite ban against flights in D.C.

THE UGLY...



Drone drugs smuggle



Islamic state terror acts



Criminals used drones against FBI rescue



ISIS Terrorist Drone University

Terrorists drone attacks are coming to the US “imminently”, warns FBI director

Haye Kesteloo -



Traditional counter-drone technologies are ineffective in **urban environments**



TRADITIONAL COUNTER-DRONE TECHNOLOGIES

Additional flying objects



No Clear line-of-sight



Radar



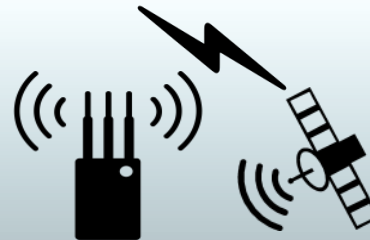
Optical

Detection

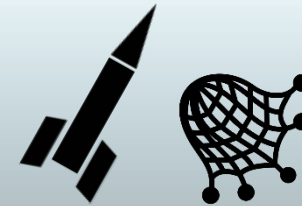
Urban communication & Signals



Collateral damage



Radio Control &
GPS Jamming

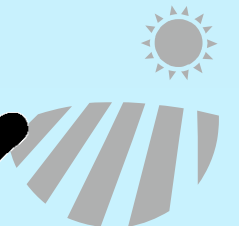


Kinetic

Mitigation

Urban Environments

Rural Environments



COUNTER-DRONE SOLUTIONS FOR URBAN ENVIRONMENTS

Additional flying objects



No Clear line-of-sight



Communication



Radar



Optical

Detection

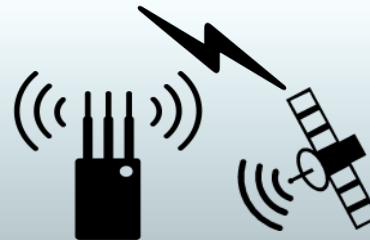
Urban communication & Signals



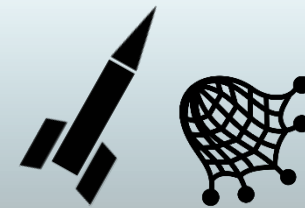
Collateral damage



Take-Over



Radio Control &
GPS Jamming

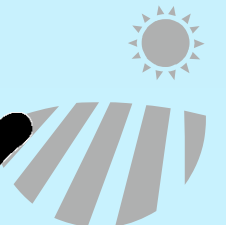


Kinetic

Mitigation

Urban Environments

Rural Environments



DRONES RADIO EVOLUTION



WiFi

2012



D-FEND
SOLUTIONS

Proprietary,
Long distance communication

2018



ENFORCEAIR™ BY D-FEND

An autonomous end-to-end system
that detects & takes control over rogue commercial drones
and lands them safely in a designated zone

Designed for Urban Environments

- ✓ Non-jamming
- ✓ Non-kinetic
- ✓ No line of sight



ENFORCEAIR™ BY D-FEND

Modular capabilities



ENFORCEAIR - HOW DOES IT WORK

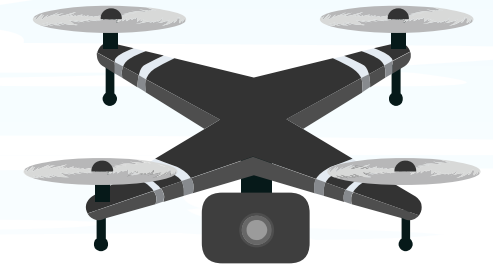
Autonomous Software Defined Radio (SDR) system
designed for urban environments



Disconnect



Take over control



ENFORCEAIR - PERFORMANCE



MULTIPLE DEPLOYMENT OPTIONS



Single-Sensor

Command Center

Ad-hoc / Fixed / Vehicle deployment



Multi-Sensors

Command Center

Central command & control, scalable topology

ENFORCEAIR COMMAND & CONTROL

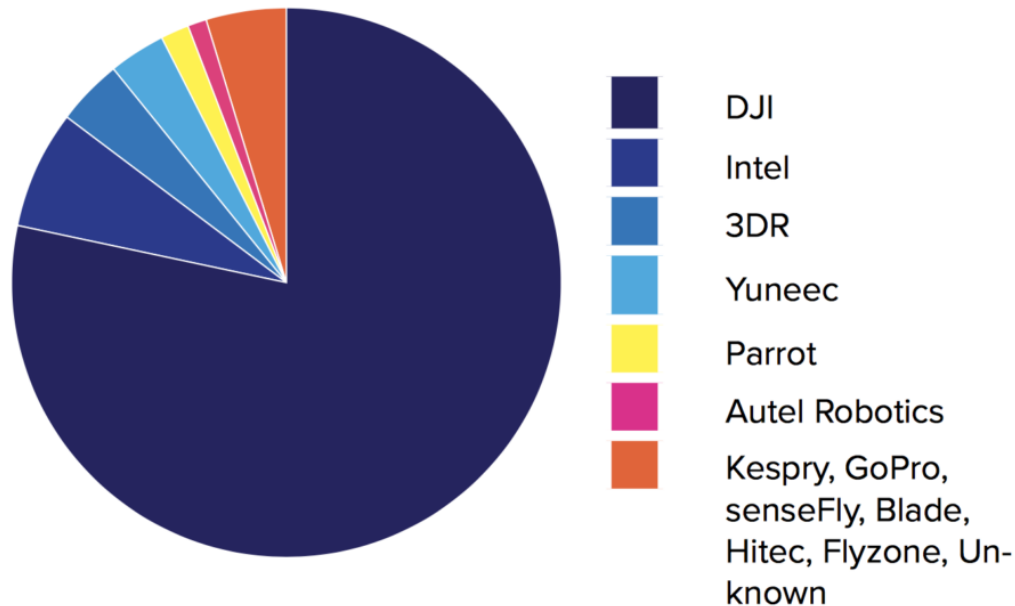


FIRMWARE UPDATE SERVICE

Periodic firmware update to protect against new drones and new radio modules
(Focus on DJI ,leading >80% market)



Top 30 Non-Hobbyist Drone Manufacturers



D-FEND SOLUTIONS

Providing **safe** counter-drone solution for **urban** environments



Airports



Prisons



First Responders



Secret Services & Military



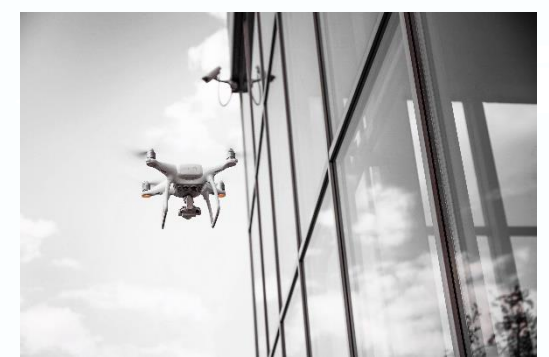
Safe City



Media Providers
& Sporting Events



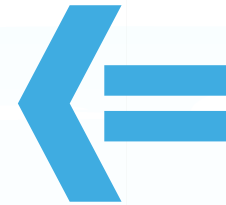
Critical Infrastructure
& Utilities



Corporate Security

DESIGNED FOR ADVANCED THREATS

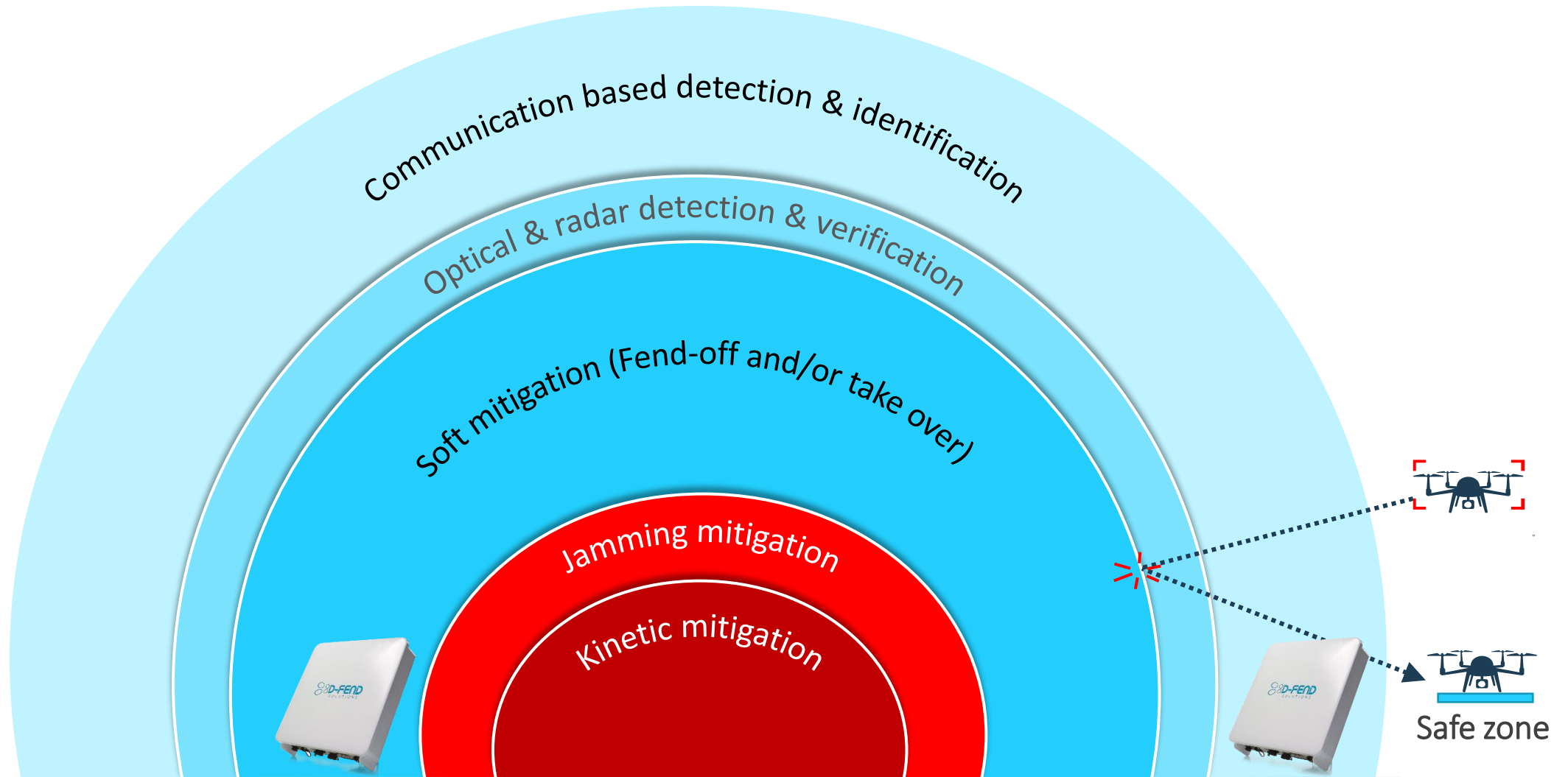
Swarm



Modified



INTEGRATED WITH MULTI-LAYER & MULTI-SENSOR SOLUTIONS



SUMMARY

- ✓ Safe counter drone solution for urban environment
- ✓ Take over control of most popular modern drones
- ✓ Eliminate threat by taking control
- ✓ Extract intelligence in real time





Counter-Drone Solutions for Urban Environments



Thank You
Meet us @ booth T21