IDF Digital Integration Case Study
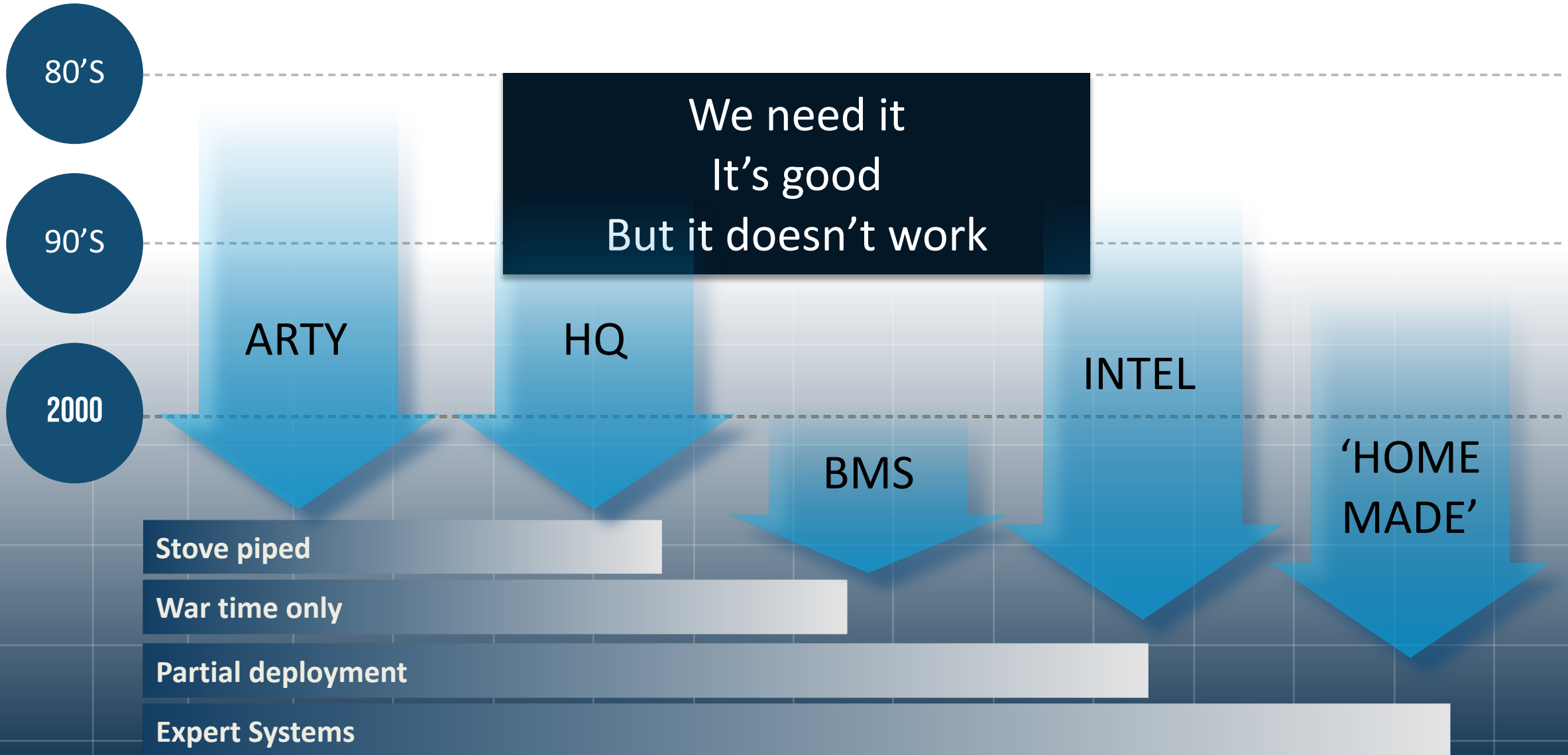
- **IDF Digital Status**
- **20 year activity in 20 minutes**
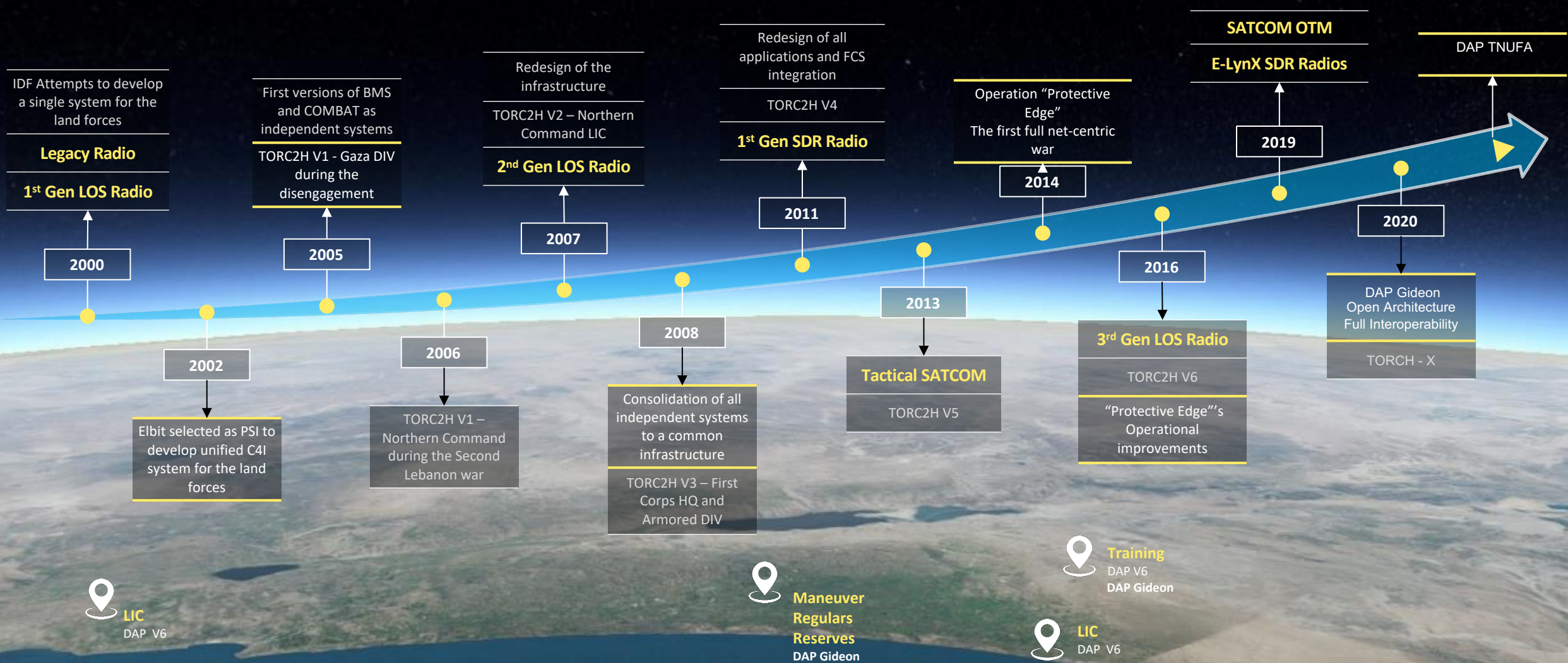
BLUF:
- Partnership culture
- Agility – 'fail fast'
- Quick wins & simplicity of adoption

DAP Digitization Journey

SATCOM OTM

E-LynX SDR Radios

DAP TNUFA

Redesign of all applications and FCS integration

TORC2H V4

1st Gen SDR Radio

Redesign of the infrastructure

TORC2H V2 – Northern Command LIC

2nd Gen LOS Radio

Operation "Protective Edge"
The first full net-centric war

2019

IDF Attempts to develop a single system for the land forces

Legacy Radio

1st Gen LOS Radio

First versions of BMS and COMBAT as independent systems

TORC2H V1 - Gaza DIV during the disengagement

2007

2014

2011

2000

2005

2020

2002

2006

2008

2013

2016

DAP Gideon
Open Architecture
Full Interoperability

TORCH - X

Elbit selected as PSI to develop unified C4I system for the land forces

TORC2H V1 – Northern Command during the Second Lebanon war

Consolidation of all independent systems to a common infrastructure

TORC2H V3 – First Corps HQ and Armored DIV

Tactical SATCOM

TORC2H V5

3rd Gen LOS Radio

TORC2H V6

"Protective Edge"'s Operational improvements

Training
DAP V6
DAP Gideon

LIC
DAP V6
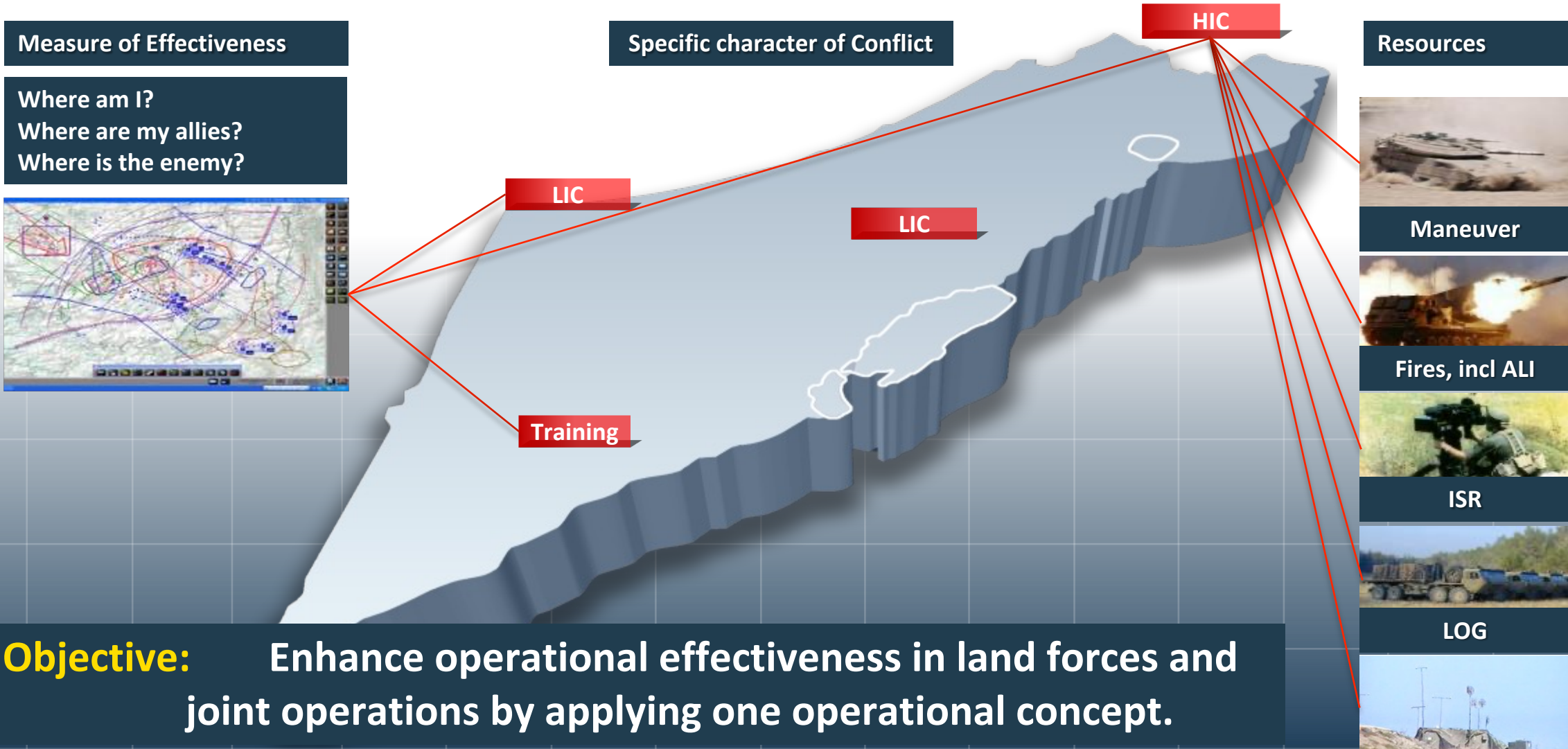
Maneuver Regulars Reserves
DAP Gideon

LIC
DAP V6

Connecting the Dots
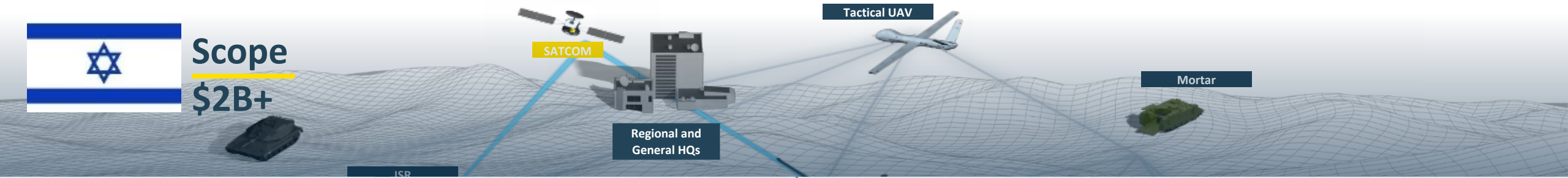
Elbit Systems™
C4I and Cyber

- From Situational Awareness to **Multi** Domain Networked Operations

- All Army Command and Control capabilities are digitized

- One logical network, interoperable across services (Air, Navy, Intel, Cyber)

- Challenge - On going demand for bandwidth and growth of data and complexity

- Mind opener – expanding the boundaries of possible

Connecting the Dots
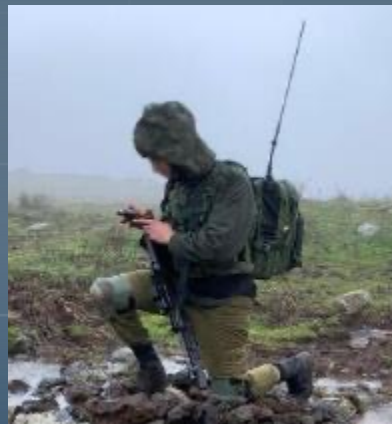
IDF C4I | Where does it all begin

Scope
$2B+

SATCOM
Tactical UAV
Mortar
Regional and General HQs
ISR
VHF/UHF
SOF
Mobile CP
Logistics

Elbit Systems™
C4I and Cyber

ELBIT SYSTEMS OVERALL PROGRAM DELIVERY **RESPONSIBILITY**

Network Warfighting Evolution

	Deployed DAP ,L200		Deployed DAP GIDON, TKA		2021-2025		Vision	
	Maned				**Hybrid**		**Autonomy**	
Operational		Decision Support C^{4}I Solution		Multi Domain Combat network		Semi- Autonomy Combat Network		Autonomous Combat System
C^{4}I		Decision Support C^{4}I Solution		Open platform for Combat Network Solution		Multi Dimensions Fast network		Regulated C^{5}i Eco system development App Store
Comms		Tactical Network Non IP HDR ,TIGER		IP SDR and waveforms E-Lynx SmarTMR		Spectrum Superiority Elynx MC		IOT , Nano SAT, UWB, 5G, E-LynX MC
Cyber		Gates Protection		Multi layer Protection & Secure Dev.		Tactical Cyber & Defense & Offense		Cyber Dimensions Warfare

Connecting the Dots

Partnership across the board (The IDF- Elbit way)

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Army Steering Board

- Headed by Army COS
- Force design teams
- Quarterly reporting
- Act at pace

Army Steering Board (center), surrounded by: Logistics, ORBAT, Doctrine, Maneuver, Signals, Fire, Intel, HR, Training
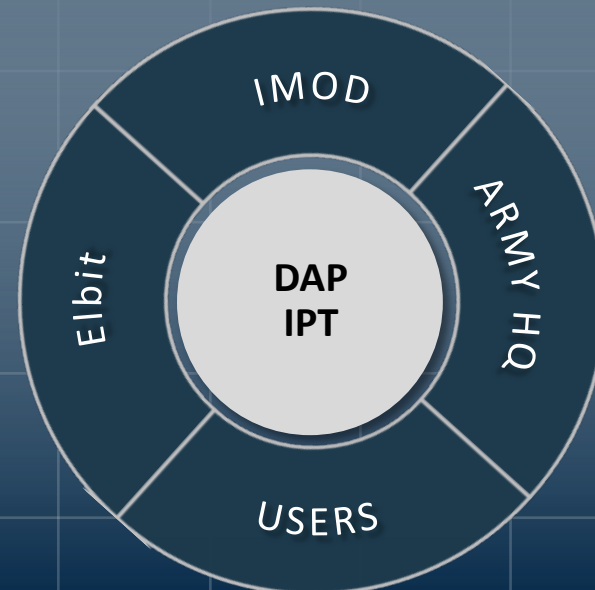
Values

- Vision view
- Accountability
- Transparency
- Agile approach
- Deploy Or Die!

DAP IPT

- Empowered management
- All stakeholders
- Weekly, day long meetings
- Week by week progress
- Reporting back

DAP IPT (center), surrounded by: IMOD, ARMY HQ, USERS, Elbit

Achieving objectives

- System Champion
- User feedback
- Field activities
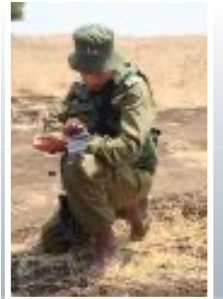- Open procedure

Connecting the Dots

Quick Wins

Early on exercise	Early on operations	Make it a routine (Planning , briefings)	Quick turn around for user feedback	Reward Early adopters

System integrator Partner | key challenges

Define unique system requirements

Integrator's Portfolio of skills

Advanced yet affordable solutions

Large scale systems of systems integration

Upgrade existing military platforms

Adapt available technology Quickly

Capability with extended life time

Methodology to field complex systems rapidly by training and assimilation

Integrate multi-vendor, multi-technology

Integrate legacy systems

Digitization | lessons learnt

- **Technology and project driven without the conceptual framework**

- **Life cycle view – limited skill to develop a comprehensive view**

- **Limited program team (customer, user , supplier) without enough perspective**

- **Partial understanding of available technologies and development concepts.**

- **Huge investment needed with no practical ROI in sight**

- **Lack of flexibility to adjust according to on-going learning**

- **Legacy systems – lack of vision to re-use and enhance during transition**

- **Training , Training & Training…**

- **System Champion – a leader to get this across the line!**