

Innovation Changing Reality

Sagi Dagan, VP Strategy

September 2022

רשות החדשנות
Israel Innovation Authority

Israel – Global Leader in Innovation

Global Innovation Index

15th place

Bloomberg Innovation Index

7th place

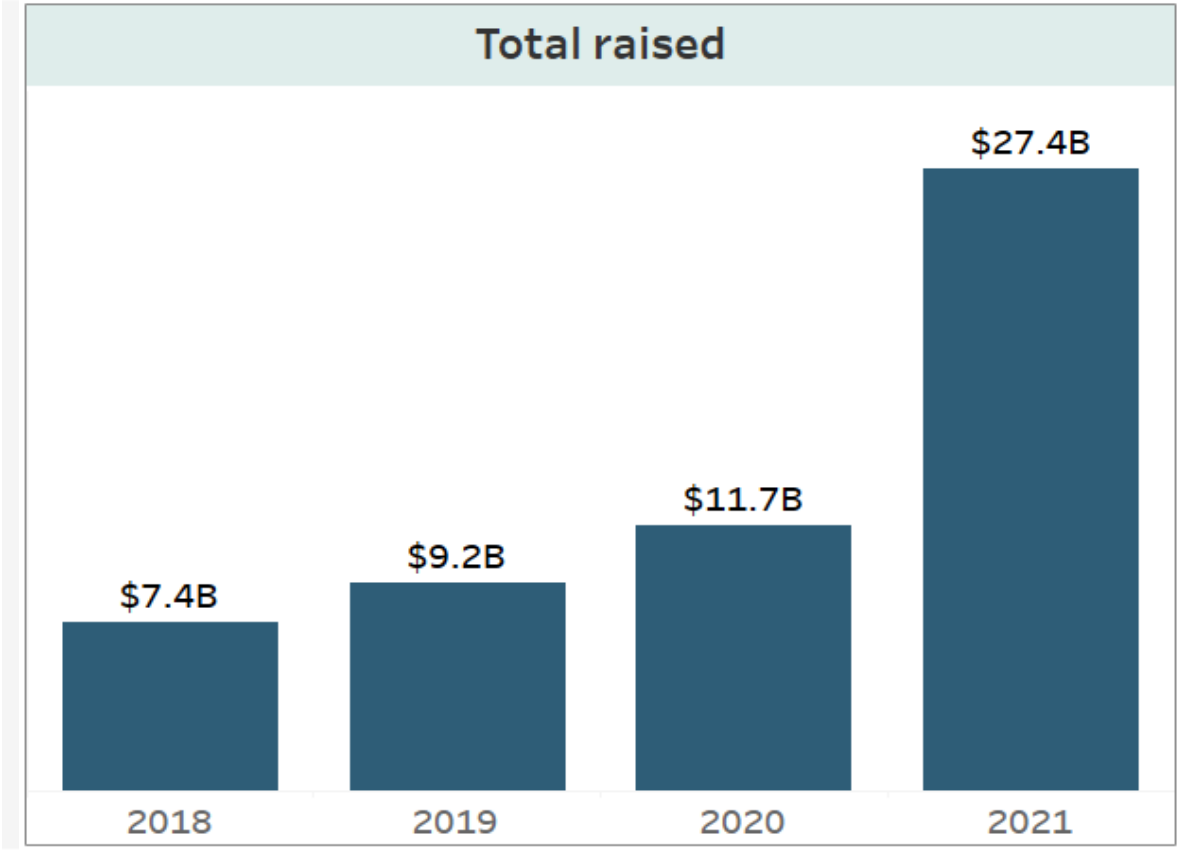
Global **Start-Up** Ecosystem Ranking

6th place



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Israel Innovation Authority

The Israeli High-Tech is Booming



10.4% of total employees (2021)

15.3% of total GDP (2021)

54.2% of total Israeli exports (2021)

25% of income tax (2018)

Source: IIA adaptions to IVC and ICBS

Israel Innovation Authority

Our Mission

Strengthening the competitiveness of the Israeli innovation hub as a global leader of ground-breaking technological innovation, to ensure inclusive and sustainable economic growth



1

Investing in innovative R&D and technologies in new fields

2

Gearing up for future technologies and new ecosystems

3

Enabling Activities – promote the High-Tech's competitiveness in the world, via governmental, national, and international initiatives

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The Innovation Authority in a Nutshell



NIS 1.54 Billion

Annual Budget
Grants and Investments



NIS 0.5 Billion

Annual International Budget,
(including the
Horizon Program)



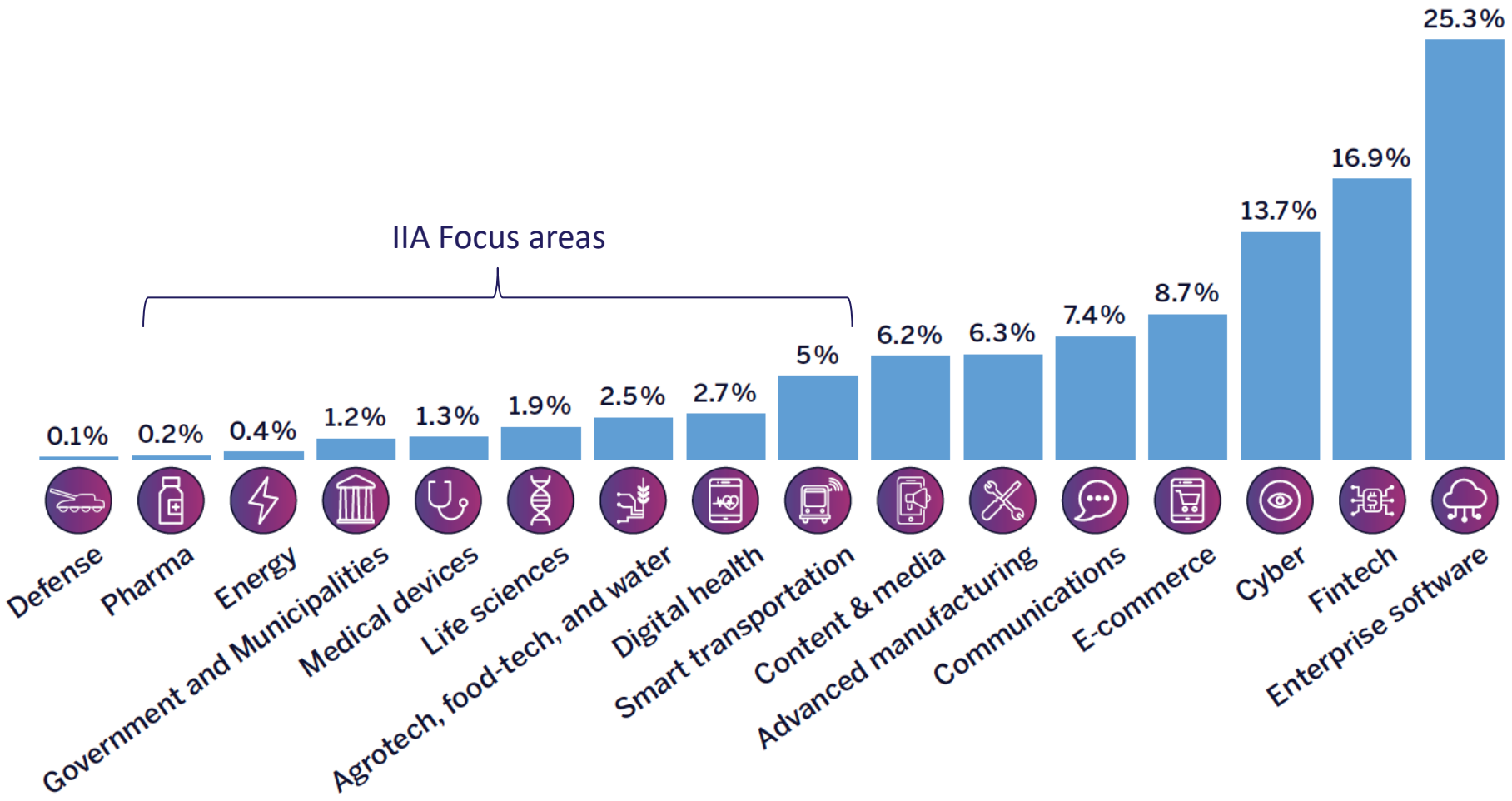
2,155 Applications

in 2021
About 53% approved
(872 companies)

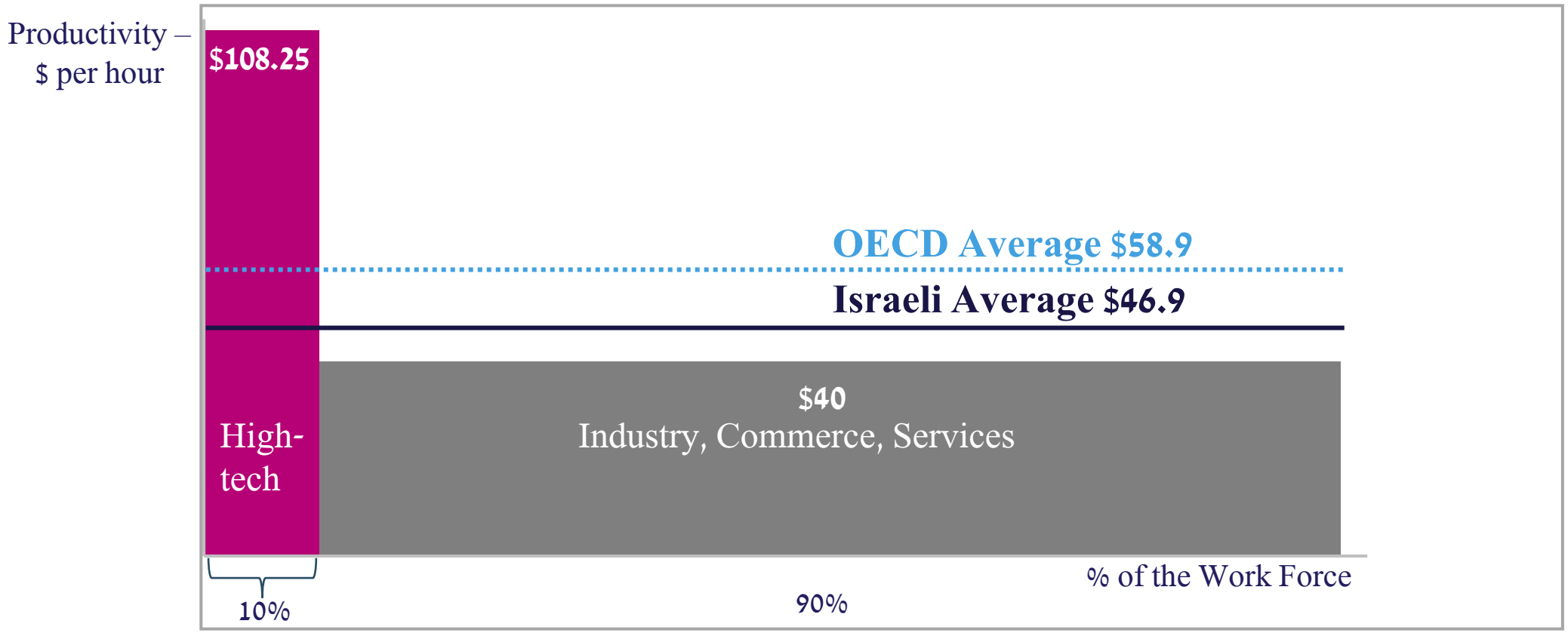
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18 Enterprise Software, Fintech, and Cyber Startups Attract Most Of The Investors

Distribution of investments in private high-tech companies by area of activity (2021)



The Israeli Productivity Problem



Source: OECD 2019, Israeli Central Bureau of Statistics 2018, Calculations and adjustments were made to CBS data



Strategic Coordinated Initiatives

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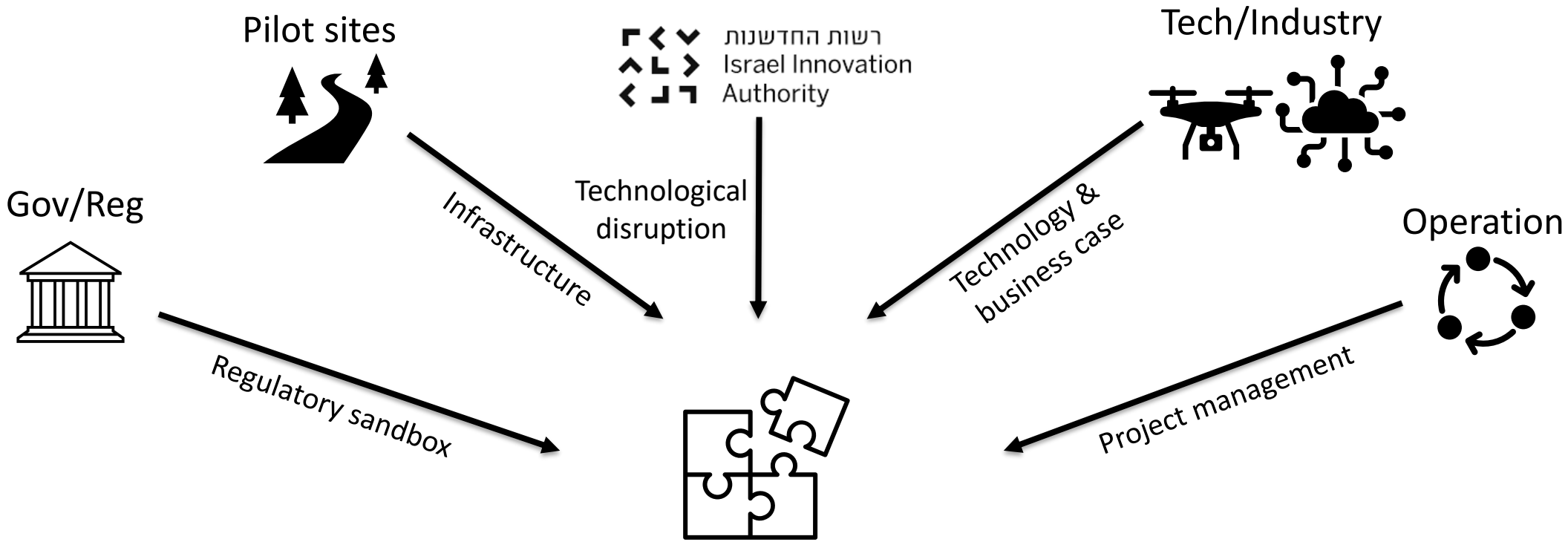
Changing reality with innovation

Collaborations between the **public and private** sectors aimed at **generating a significant disruptive-change** in a specific and defined area of **economic activity**

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- Use case
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Large-Scale Demonstration in a Regulatory Sandbox (LSDRS)



Multistakeholder coordinated operation for LSDRS

Implementation of disrupting technologies on a commercial scale with a market impact

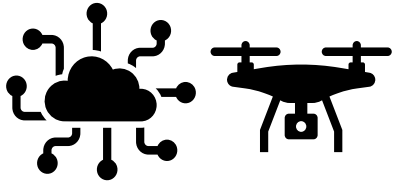
Impact and benefits

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Disruption Policy

Comparative advantage for Israeli companies

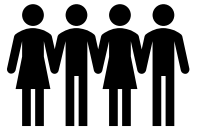
- ✓ **Testing technology & business model**



Private sector

Global market gain vs. local market loss

- ✓ **Testing technology & business model**



The public

Economic and technological progress

- ✓ **Testing public acceptance**



Government

Design of future policies and regulatory solutions

- ✓ **Testing new state regulations & policies**

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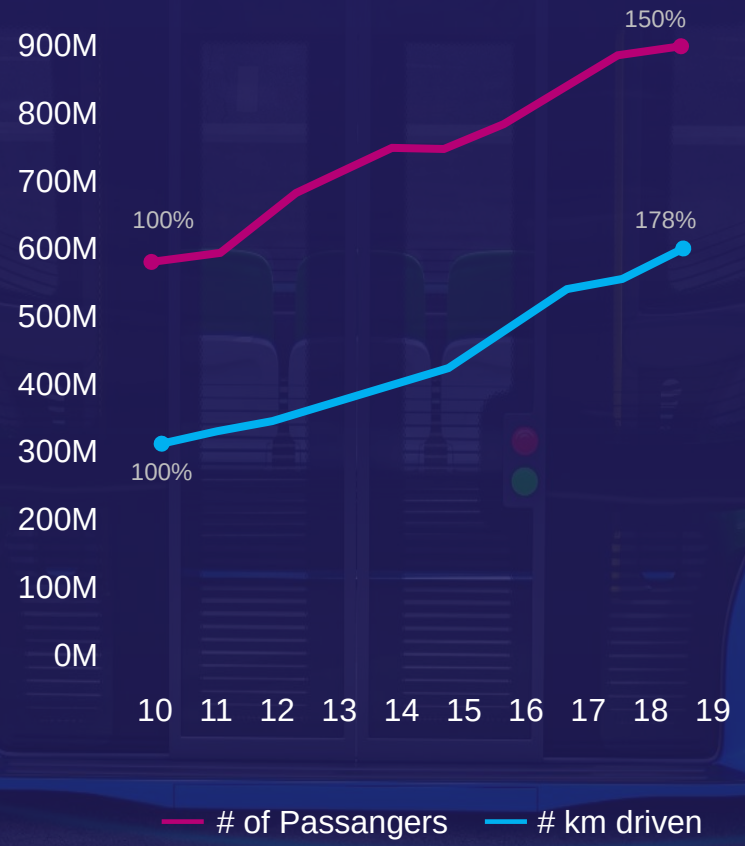

הרשות הארצית
לתחבורה ציבורית
משרד התחבורה
והבטיחות בדרכים
נתיבי איילון
תחבורה מתקדמת לישראל
רשות החדשנות
Israel Innovation Authority
National Initiative for
Autonomous Public Transport

Trends

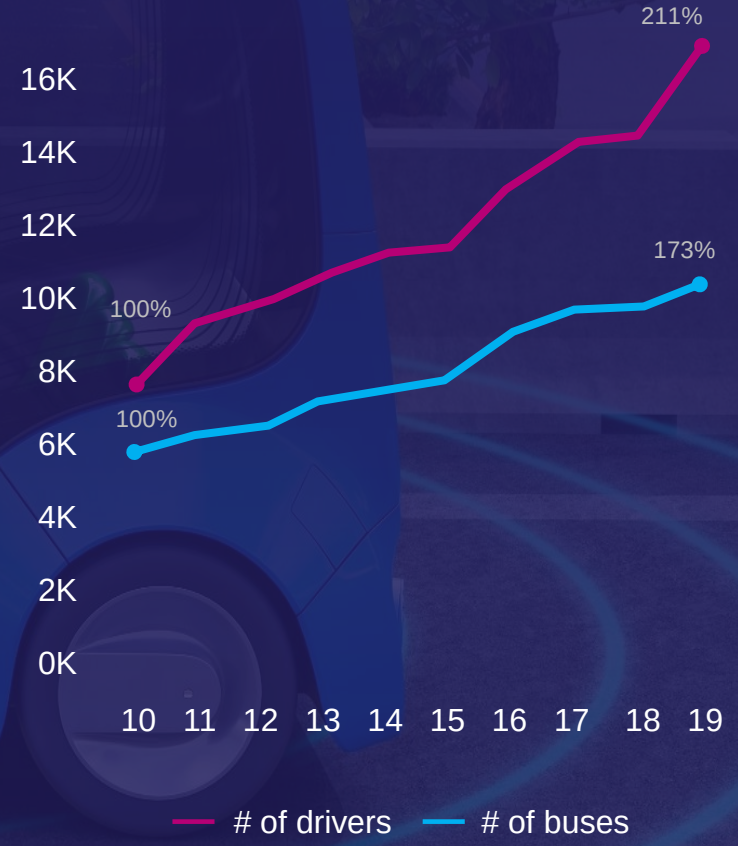
Number of rides



Number of Passangers and km driven



Number of buses and drivers



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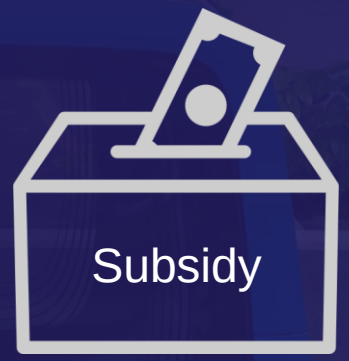
The market



Exponential Growth



Most of expenses



Most of revenue



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Challenges



Command and control center



Controller – buses ratio



Lack of communication



ODD (level 4)



Reactions



Operational flexibility



Payments



Fire fighting



Documentation and recording



Entering and exiting an operational area



Report about events



Driving without GPS



Passenger experience



Service quality



Adjusting speed to road conditions



Effect of map accuracies



Towing



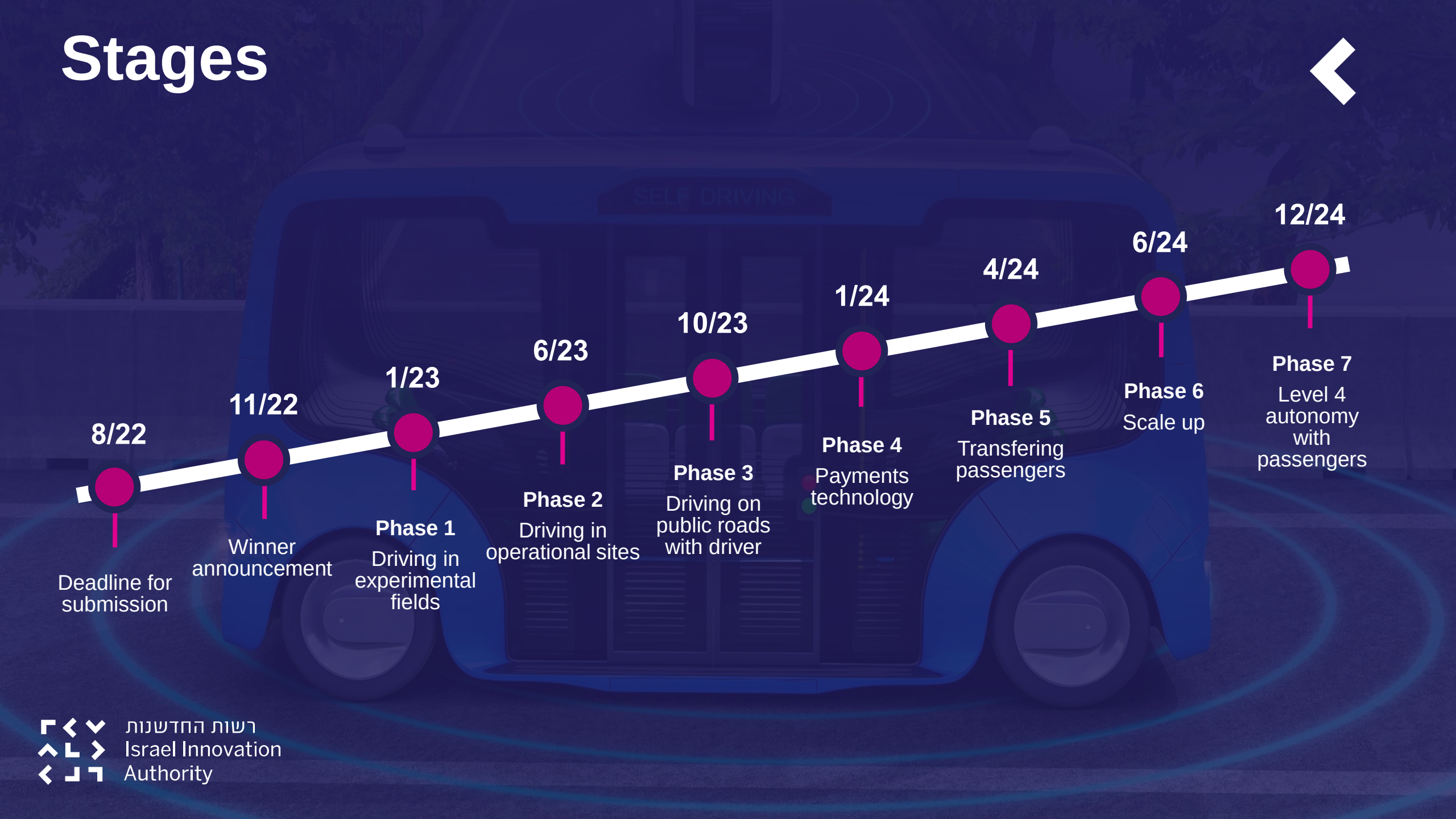
emergency braking



Stopping at stations

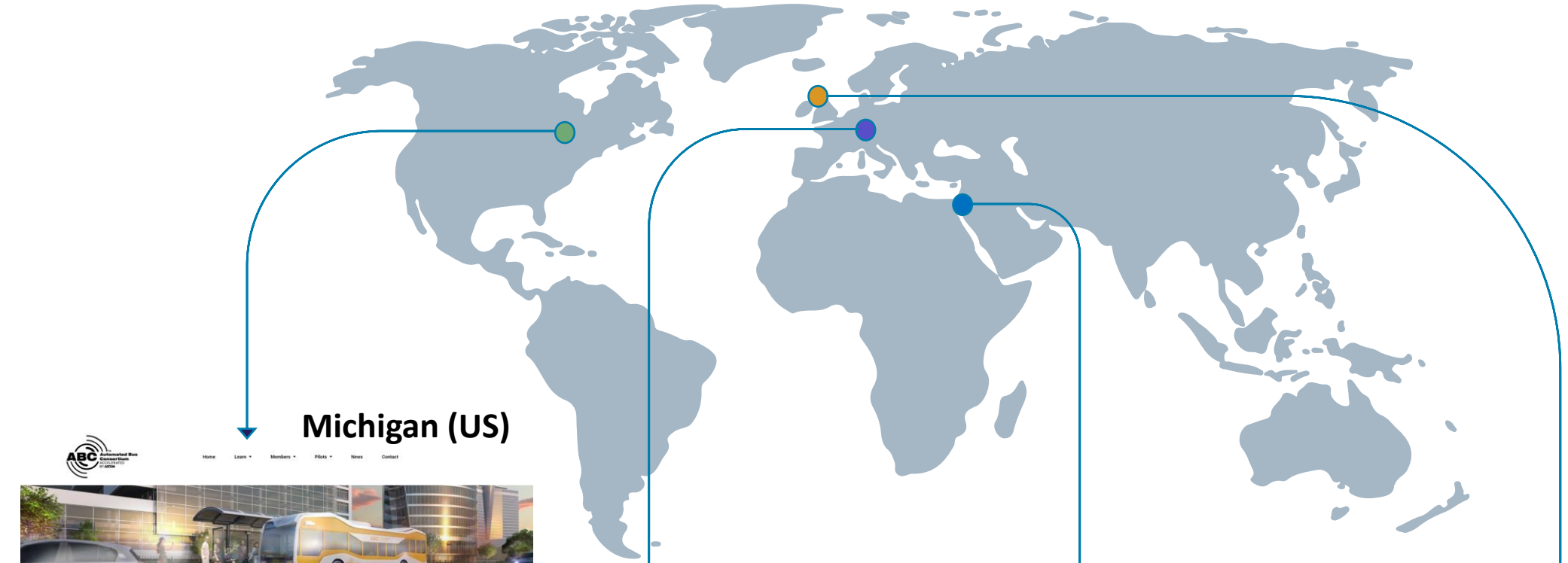
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Stages



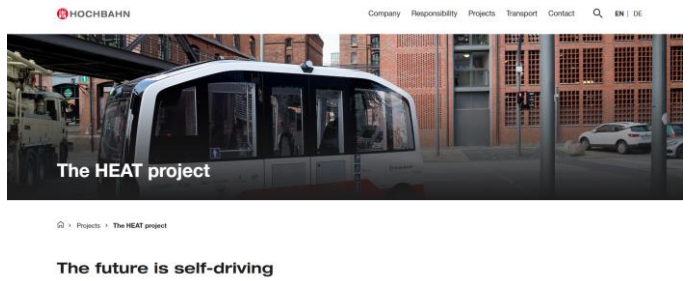
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Initiatives around the world

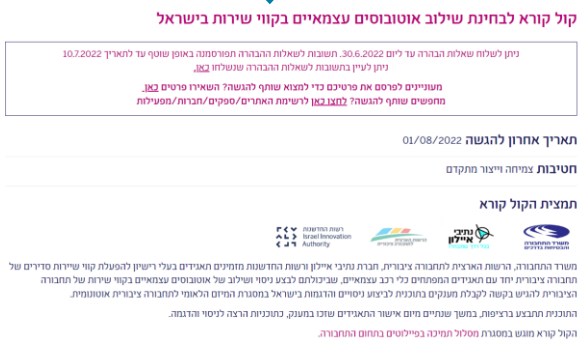


Michigan (US)

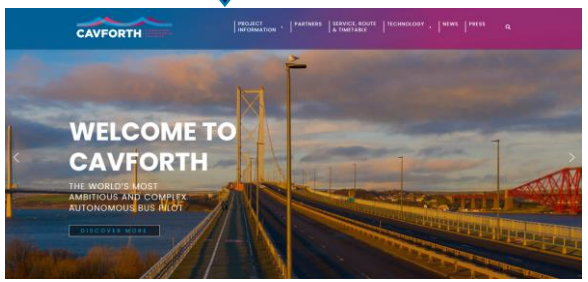
Germany



Israel



Scotland



Why Israel?



AV technology ecosystem

Increasing number of start-ups on OEMs R&D centers



Scale

Opportunity to quickly examine usage scenarios on a commercial-scale



Direct support

Financial, operational and regulatory



Regulatory leadership

One of the most advanced autonomous vehicle laws in the world. Allows commercial deployment of autonomous vehicles without a safety driver on public roads (SAE levels 4-5), including paid services

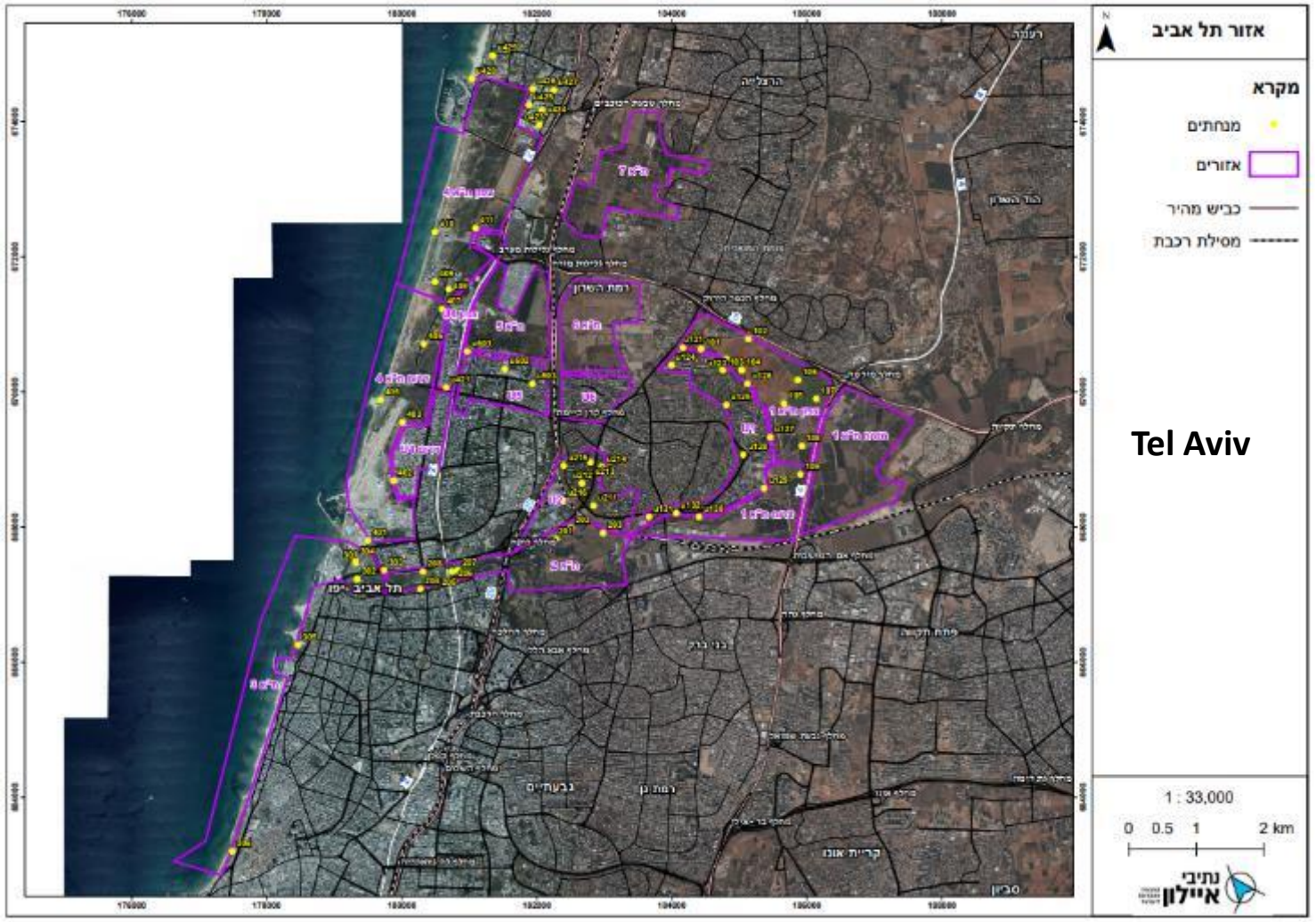
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Israel National Drone Initiative (INDI)

צילום: שחר לילי עמיאל

FLIGHT ZONES AND LANDING SITES



1

Hadera

USSP

2

Hadera & Tel Aviv

USSP

USSP

3

Yeruham

USSP

USSP

4

Beer Sheva

USSP

USSP

Achievements

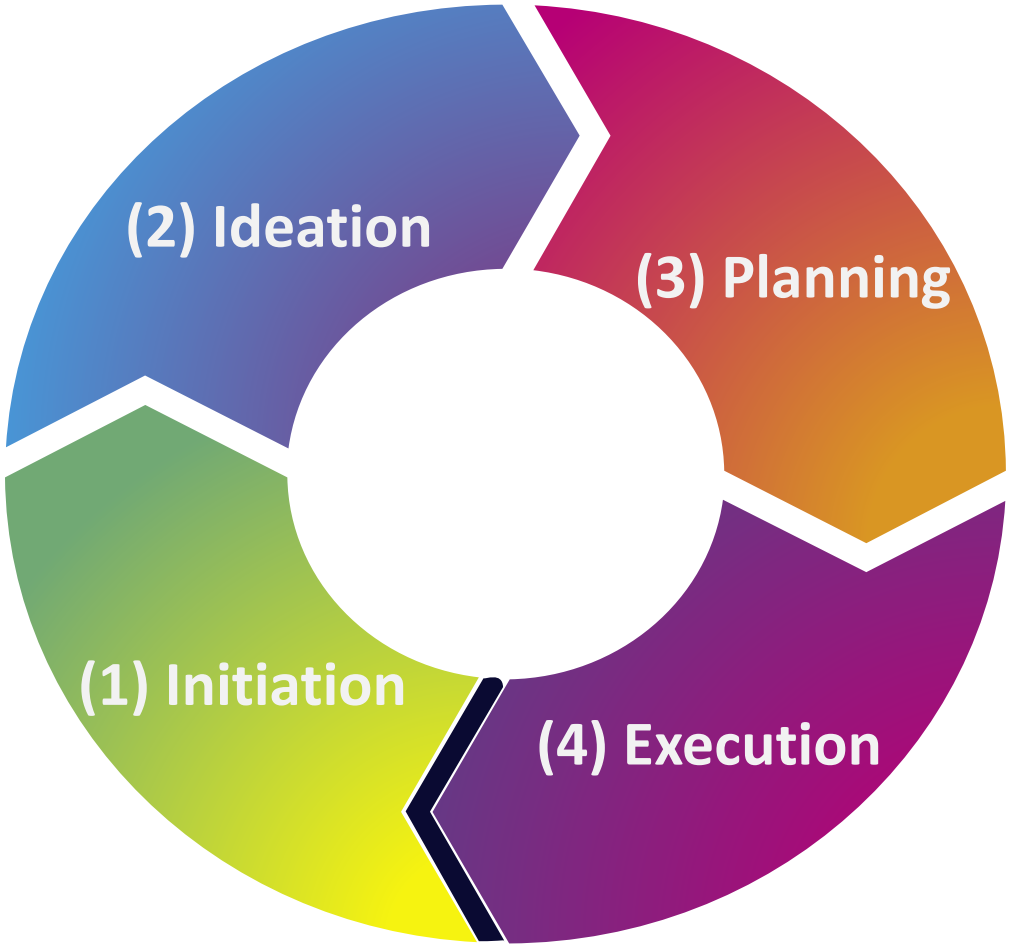
- About 60 days of demos with 15,000 autonomous sorties in controlled airspace and in multiple USSPs
- 16 drone companies, 6 municipalities and dozens of other business and public entities
- Operation in Brazil, proof of global technological feasibility
- Launch of 2nd CFP

INDI Israel National Drone Initiative | MINISTRY OF TRANSPORT AND ROAD SAFETY | CAAI רתא | AYALON HIGHWAYS | רשות החדשנות Israel Innovation Authority | Israel

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Phases



(5) Management and operation

~ 3 - 4 years

(1) Initiation phase - discovery



A - Verification of a need

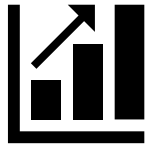
- Absence of a private market
- Industry need
- Public challenge
- Technological readiness
- Potential comparative advantage
- Coordinated effort

B - Verification of feasibility

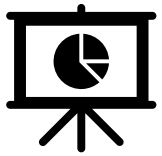
- Regulatory
- Operational
- Economic

(2) Ideation phase - analysis

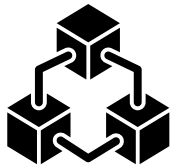




- Market trends and SWOT analysis



- Technological segments and potential
- Business models and potential



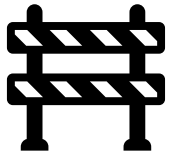
- Barriers (technology, operational, financial, regulatory)
- Policy and regulation analysis



- Key stakeholders – e.g. customers, end-users, pilot sites and other beneficials



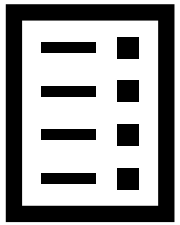
- Financial incentives
- Competitive positioning (Why Israel?)



- Parallel global projects

(3) Planning phase - design

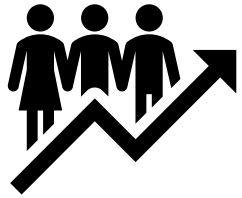




Design of a pilot program and a regulatory sandbox



Marketing strategy



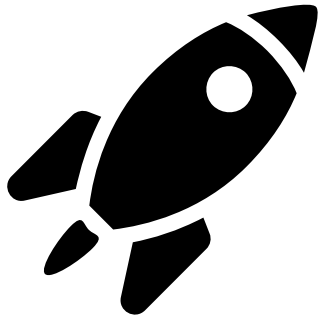
Establishing external and internal partnerships

(4) Execution phase - call for proposals



Pre-CfP

BizDev activities

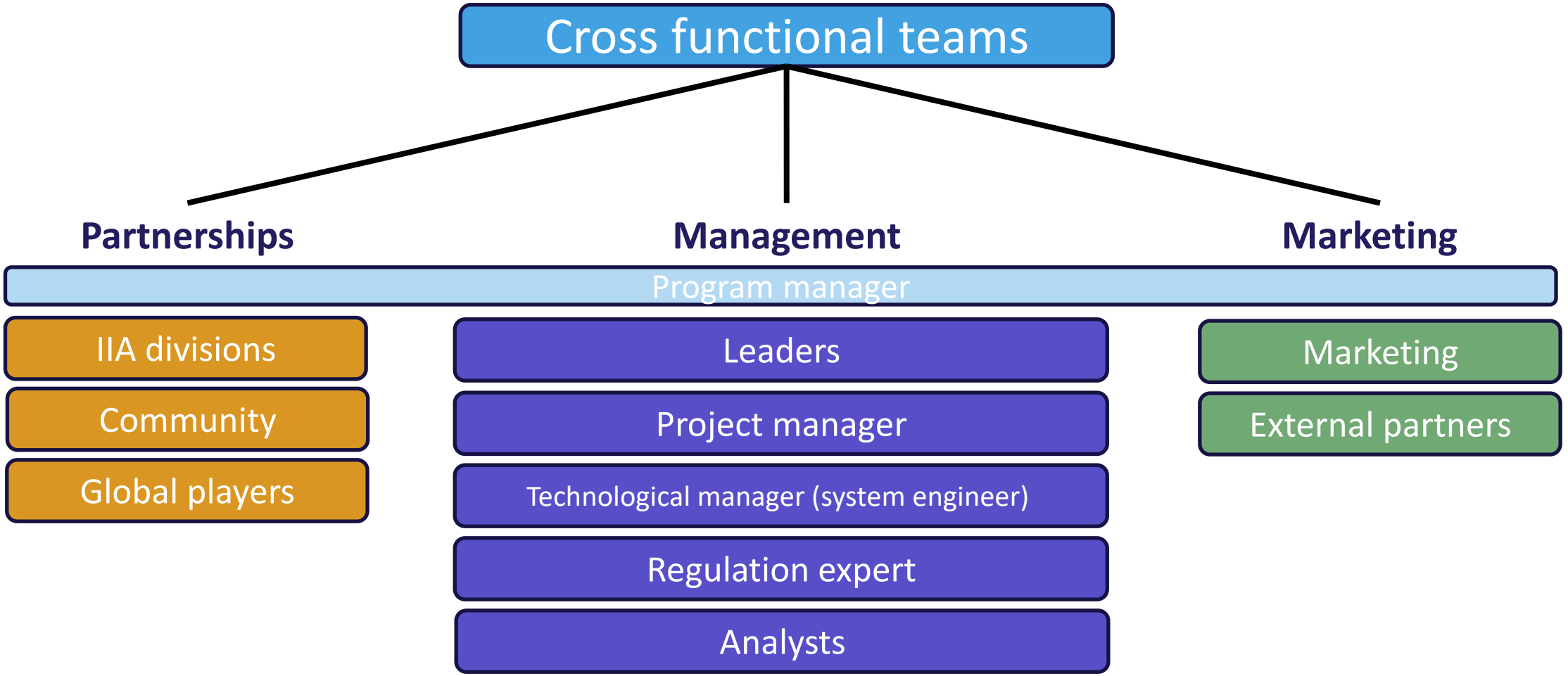


Launch of Call for Proposals (CfP)

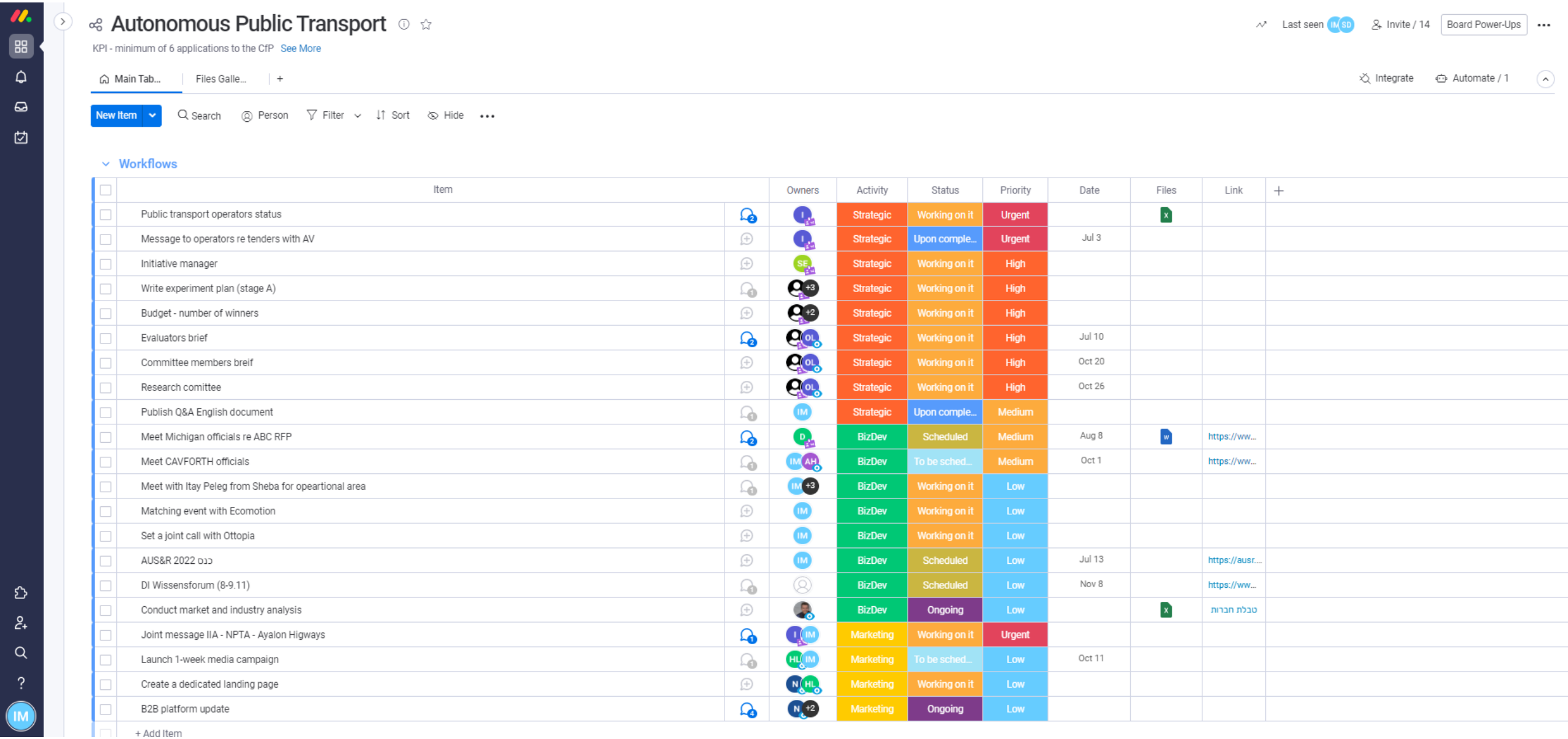
Post-CfP

Due diligence and investments committee decision

Matrix workflow



Agile project management



Autonomous Public Transport

KPI - minimum of 6 applications to the CfP See More

Main Tab... | Files Galle... | +

Last seen | Invite / 14 | Board Power-Ups | Integrate | Automate / 1

New Item | Search | Person | Filter | Sort | Hide

Workflows

Item	Owners	Activity	Status	Priority	Date	Files	Link
Public transport operators status		Strategic	Working on it	Urgent			
Message to operators re tenders with AV		Strategic	Upon comple...	Urgent	Jul 3		
Initiative manager		Strategic	Working on it	High			
Write experiment plan (stage A)	+3	Strategic	Working on it	High			
Budget - number of winners	+2	Strategic	Working on it	High			
Evaluators brief	OL	Strategic	Working on it	High	Jul 10		
Committee members breif	OL	Strategic	Working on it	High	Oct 20		
Research comittee	OL	Strategic	Working on it	High	Oct 26		
Publish Q&A English document	IM	Strategic	Upon comple...	Medium			
Meet Michigan officials re ABC RFP		BizDev	Scheduled	Medium	Aug 8		https://ww...
Meet CAVFORTH officials	IM AH	BizDev	To be sched...	Medium	Oct 1		https://ww...
Meet with Itay Peleg from Sheba for opeartional area	IM +3	BizDev	Working on it	Low			
Matching event with Ecomotion	IM	BizDev	Working on it	Low			
Set a joint call with Ottopia	IM	BizDev	Working on it	Low			
AUS&R 2022 כנס	IM	BizDev	Scheduled	Low	Jul 13		https://ausr....
DI Wissensforum (8-9.11)		BizDev	Scheduled	Low	Nov 8		https://ww...
Conduct market and industry analysis		BizDev	Ongoing	Low			טבלת חברות
Joint message IIA - NPTA - Ayalon Higways	IM	Marketing	Working on it	Urgent			
Launch 1-week media campaign	HL IM	Marketing	To be sched...	Low	Oct 11		
Create a dedicated landing page	N HL	Marketing	Working on it	Low			
B2B platform update	N +2	Marketing	Ongoing	Low			

+ Add Item

Comparison to a Defense “System of Systems” Project

- Identifying the challenge without defining the business model or solutions
- Availability of civilian technologies vs limits of defense technologies
- Potential for scale-up though markets and investments
- Involvement of a final customer in the R&D process, and the DNA of the tech companies (defense contractors vs. private companies)
- Time-to-market
- Competition between business groups
- Number of players
- Role of the integrator

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Active & Future Initiatives

I

II



Drones & Air Mobility



Autonomous Public Transport



Volumetric modular construction



Production of Alternative Protein



Data Driven Agriculture



Autonomous Trucks



Health Data & Services



Maritime Tech & Platforms


Thank you!
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