BIO-CONVERGNECE

The Future of Health-tech

רשות החדשנות
Israel Innovation
Authority

Israel Innovation Authority (IIA) - Our Mission

Invests over $500M annually
30% of the investments are in life sciences

Investing in innovation to promote sustainable and inclusive growth

Strengthening innovation ecosystem

Enhancing economic impact

Enabling emerging disruptive technologies

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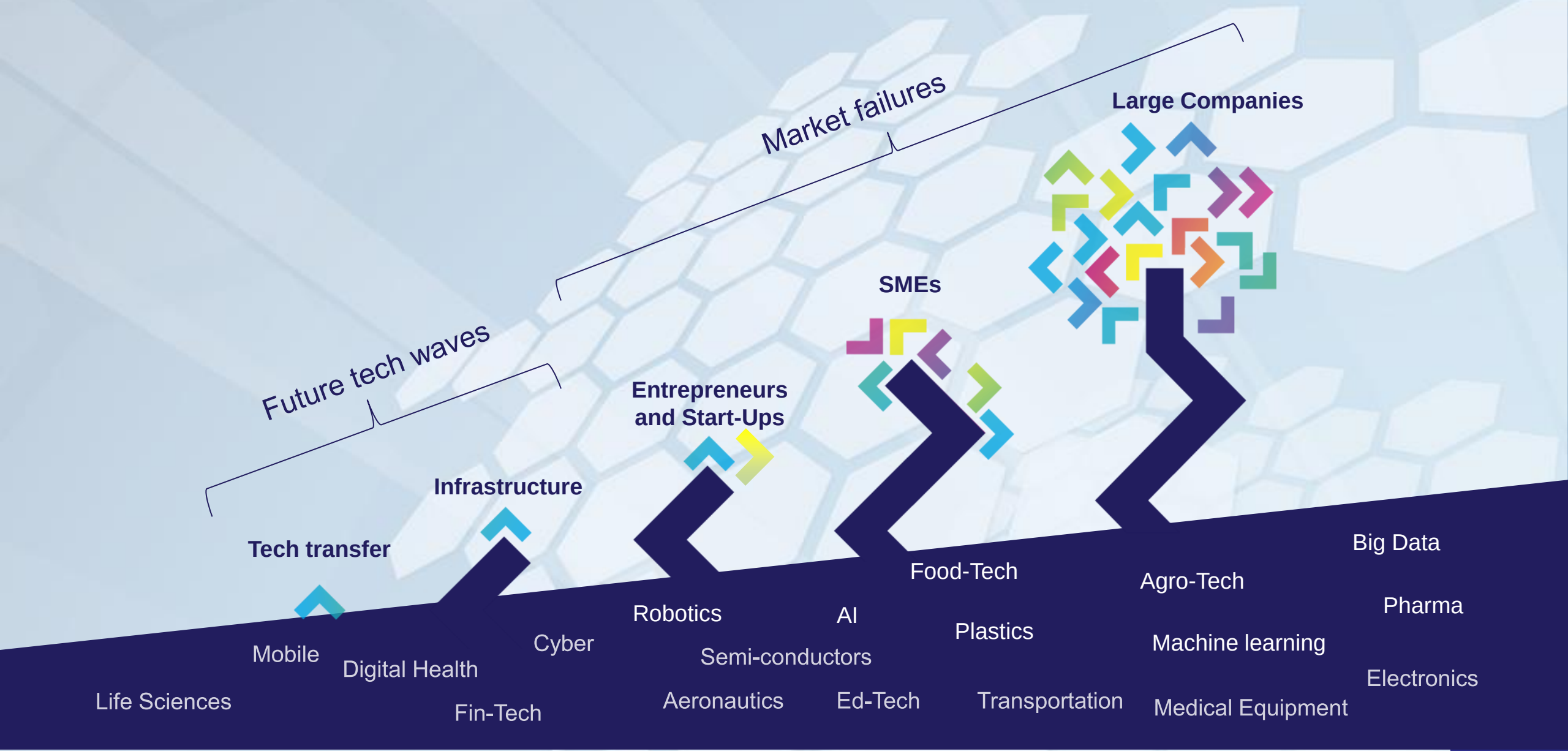
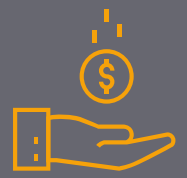
Israel Innovation Authority

Complementing Private Funding



Principles of Our Innovation Policy

No Equity



Conditional Loans

Matching

Enabling the market
Not leading it

2018 Numbers

$ 500 million

Total Funding Budget

1500

projects

$ 130 million

For “New Clients”

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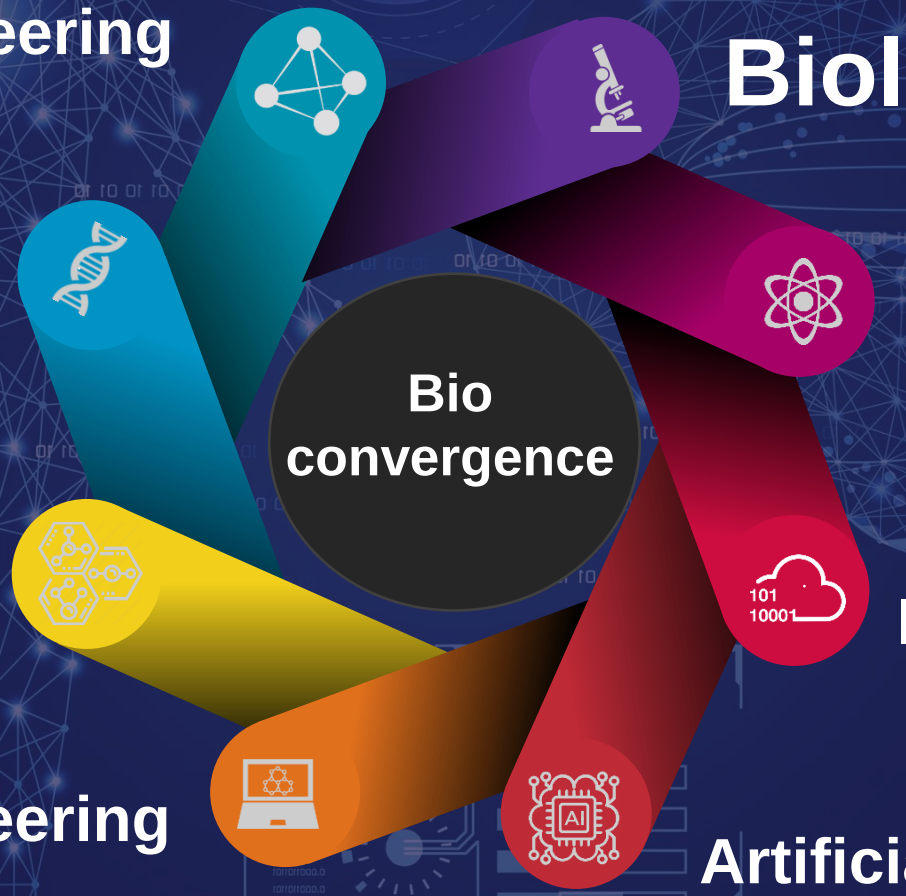
Bio-convergence - integrative technologies



Material Engineering

Biology

Genetic Engineering

Physics

Nanotechnology

IT & Big Data

Electrical Engineering

Artificial intelligence

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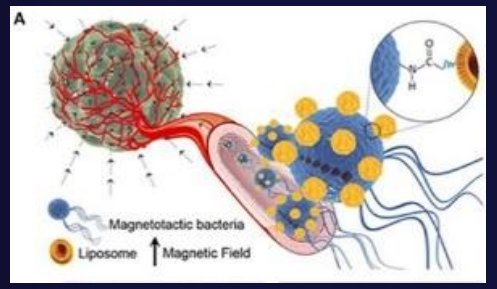
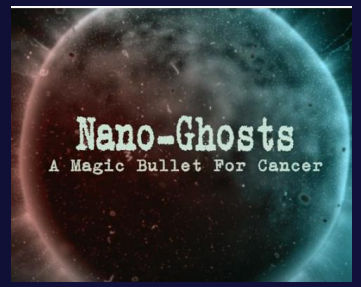
Bio-convergence technologies

Bio-Engineered Nanorobotics



Engineered delivery vehicle based on either living systems or devices to target drugs to specific sites



Prof. Marcelle Machluf (Technion)

Therapeutics Discovery

Highly scalable biological model platforms to facilitate drug screening

Tissue Dynamics

Prof Yaakov Nahmias (HUJI)
Prof Doron Gerber (BIU)

Therapeutics Genetics Engineering

Re-engineered living cells and biological circuits for diagnostics and therapeutics

EMENDO BIOTHERAPUETICS

Prof Ido Amit (WIS)
Dr. Eyal Hendel (BIU)

3D printing & Cyborg Tissues Engineering

Platform technology that enables bio-fabrication and tissue engineering of transplantable organs and tissues

precisebio

Prof Ronit Satchi-Fainaro (TAU)
Prof Tal Dvir (TAU)

Bio-convergence technologies

Optogenetics Therapeutics

Genetic modifications and light stimuli to precisely manipulate cells' behavior by turning activity of certain genes in specific cells

CIRCUIT THERAPEUTICS

Dr. Ofer Yizhar (WIS)
Dr. Yoav Adam (HUJI)

Bioelectronics Medicine

Miniaturized, implantable closed-loop systems that detect and deliver precision neuromodulation of specific nerve fibers in order to treat a wide variety of disorders

GALVANI BIOELECTRONICS

Prof. Yael Yaniv (Technion)

Engineered Living & Smart Materials

Engineered materials composed of living cells that form or assemble the material itself that have the characteristics of biological systems

GINKGO BIOWORKS™ THE ORGANISM COMPANY

Dr. Peter Nguyen (Wyss Institute)
Prof. George Church (Wyss Institute)

Bio-convergence in beginning globally

Biology-Engineering Institutes

WYSS INSTITUTE

- Biologically Inspired Engineering at Harvard University
- New model for innovation, collaboration and technology translation
- 22 new startup companies

Big pharma turns to Tech

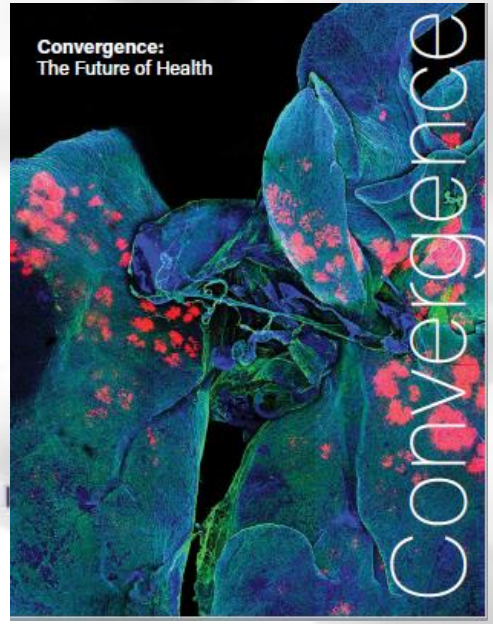
gsk verily

R&D Center for Implantable Bioelectric Medicines

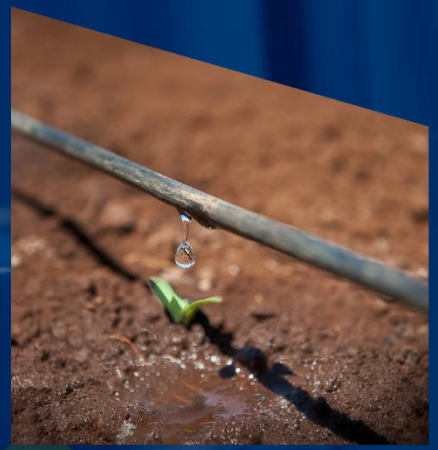
GALVANI BIOELECTRONICS

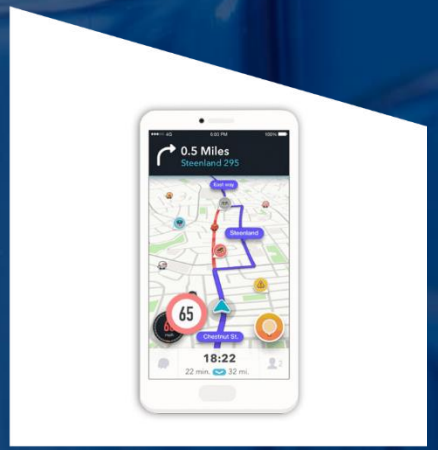
Changing Government Policy

Key recommendation by MIT white paper - **increase NIH Convergence research budget <u>from 3% to 20%</u>**



Convergence is the Base of Greatest Israeli Inventions





Toward Medicine 2040:
The opportunity for Israel in therapeutics is enormous

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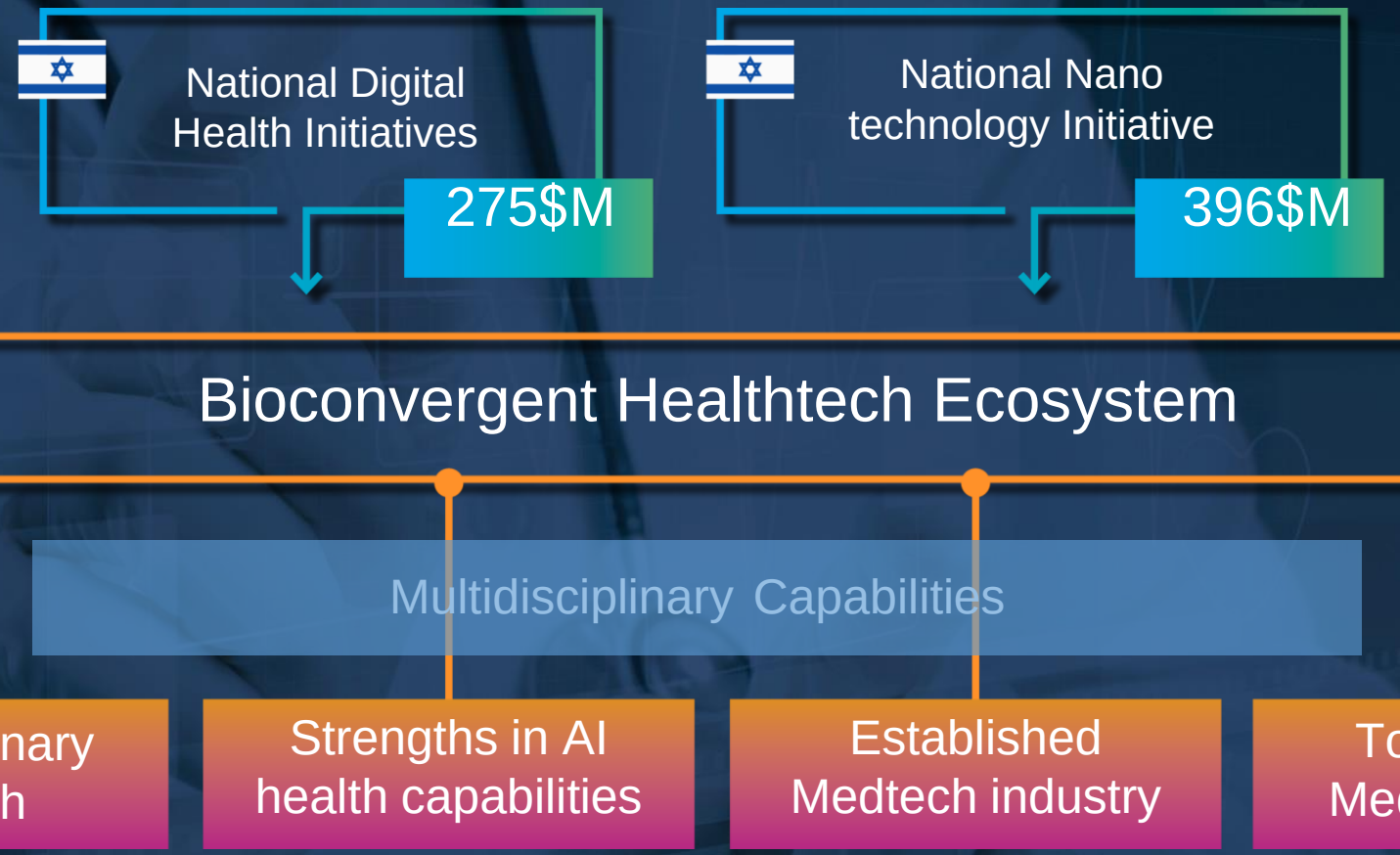
Bio-convergence - Israel's Next Economic Growth Engine



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National Funding Tools – Encouraging Bio-Convergence Across all Stages

Multidisciplinary Research & Dedicated Grants & Training

Israel National Translational Initiative

Innovation Labs , Incubators,

Seed funding

Israel Early and Growth Fund

Targeted Challenges Program

Attract R&D International Collaborations

IIA's Support Channels From Applied Research to Growth

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