

# The Academic – Industrial Economic Pipeline

## Wayne D. Kaplan

Rita Bruckstein, Benny Soffer, & Nili Weitzman *Technion – Israel Institute of Technology Technion Research & Development Foundation, Ltd.* 

## **Technion Statistics**

Fou	inded 1912
Student popu	lation 14,538
Academic departr	ments 18
Undergraduate prog	grams 50
Graduate prog	grams 83
Degrees awa	arded 110,634
Fa	aculty 565
Research ce	enters 60

Income from Technology Transfer (\$)		
2011-2012	21,961,563	

2012-2013	19,936,806
2013-2014	30,459,799
2014-2015	33,146,929
2015-2016	20,824,632
2016-2017	31,167,892

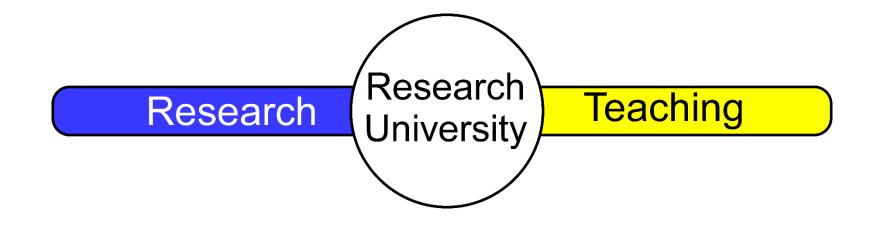


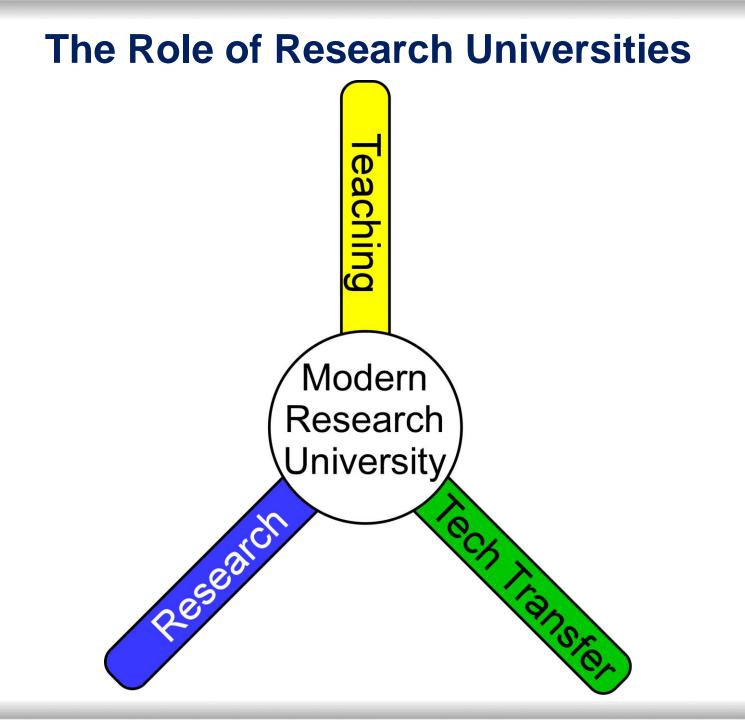


3 No	obel	Laureates
------	------	-----------

- A. Hershko 2004
- A. Ciechanover 2004
- D. Shechtman 2011

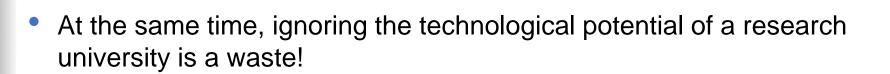
## The Role of Research Universities





## The Role of Research Universities in Defining the Economic Success of Nation States

- Classic Research University: Fundamental research and preparing the next generation of scientists, engineers, and technologists.
- Fundamental research today is the technology in 10 years; we can't ignore fundamental research today!



 At the Technion, part of our mission is to leverage this ability for the good of the State of Israel.



So at the Technion we have developed a number of conventional, and unconventional tools to leverage our technology for the community.

## **Collaboration with Industry**



- The Israeli Ministry of Economy, via the Innovation Agency, runs consortia for industry on technology topics, where academia is (100%) funded to conduct generic science on the topic at hand. [Non-exclusive licenses at a fee for members of the consortium.]
- We actively participate in EU programs, which support consortia of EU industry.
- We have direct funded research with industry, which is an important mechanism. How do we deal with IP?

## **Technion IP Policy**

- Technion owns IP developed by faculty, staff and students.
- Revenue sharing (after commercialization expenses) of 50%. This is a huge incentive, and within funded research programs with industry encourages students and staff to consider applications in addition to fundamentals.
- Funded research w/ industry: Technion owns the IP, but first right to license for the company.
  - This allows for follow-up research if the IP doesn't end up being immediately applicable.
  - License fee defined only after initial implementation, and the actual value is clearly evident.
  - Full IP transfer in the case of an exit, IPO, or the company thinks its really worth it.

 $\blacktriangleright$  ~12% of our funded research is with industry.

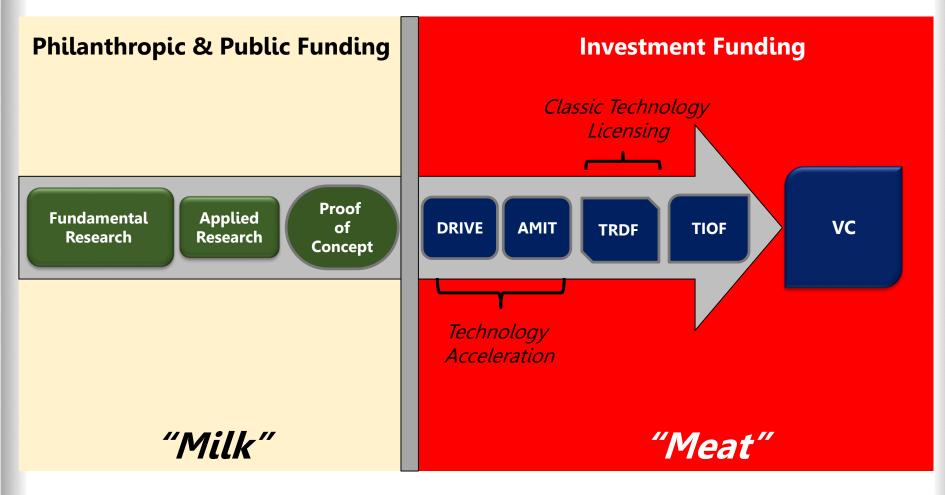
## **Technion IP Policy**

- This fails for some companies, who insist on owning the IP regardless of our investments in the field. In these cases we do not collaborate with such companies.
- We have employed "Open IP" collaborations for research centers with industry, but caution is used by both sides regarding specific topics.
- More approaches to this challenge are required!

 How is for-profit managed within a non-profit environment (without sending the VP for Research to jail)?



## **Technion Research and Economic Pipeline**





## **The Technion DRIVE Accelerator**

- Established in 12/2016
- Targeted sectors and domains: ICT, Robotics, Materials & Medical Devices, Big Data, Artificial Intelligence, Cyber Security
- > 5 years \$10M limited partnership
- Pre-seed and seed projects
- > 9 month acceleration program



#### **The Accelerator Resources**

## Fast Launches – The Purple Lane

- Standard processes for licensing IP to startup companies can take time;
- In the IT field, conventional IP (i.e. patents) are not always used, and "know-how" is the rule;
- We have begun an experiment where after approval of the VP for Research, know-how is fully transferred and all business development must be done by the faculty member. 20% of all income is shared with Just An Experiment the university.

#### INTERNATIONAL CONFERENCE ON Academia and Industry Relations

March 18-20, 2019, Haifa, Israel

**Objective:** Development of vision and policies for the 21 century to improve collaboration between academia and industry.

#### **Major themes**

- Vision and goals: balance and tradeoff between income and impact
- Mechanisms: Synergy between Technology Transfer and Technology Commercialization
- Mechanisms: Disciplinary influences
- Eco-system: external and internal
- Quantifying performance to evaluate and follow-up policies

Plenary Lectures followed by Structured Panel Discussions Ample opportunities for networking Visits to Technion facilities Opportunities for off-campus visits

# Thank You!

### Save the Date March 18-20, 2019, Haifa, Israel



## **Current DRIVE Sponsors**

Company	Activity
Schlumberger	Oilfield services company.
Cybele holdings LTD.	Israeli Investment bank
GiTV	Japanese Venture Capital
FengHe Group (F&H Singhome Fund III Ltd)	Asian investment platform
Liberty Mutual Insurance	Property and casualty insurance
FineTech Pharmaceutical, Ltd	Developing High-value APIs
LH Financial	Investment Management company
L'oreal	French cosmetics company
WeHealth by Servier	Servier's e-health department
Goodwin	Global law firm
LG	Electronics
JSW Innowacje	Polish Mining Technology
NeiborHood	Life Science Innovation





#### **Technion DRIVE Accelerator Co-Investors**



A successful multi-industry corporation from Vietnam



Haifa's development arm, owned by the Municipality of Haifa



An angel club for sophisticated investors considering investments in Israeli start-up ventures

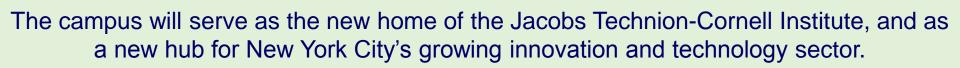
#### Total amount: \$8.4M

Technion DRIVE co-investors benefits:

- Opportunities to keep a close eye on the most powerful and disruptive companies and technologies developed by Technion students, faculty *and alumni*.
- Opportunities to co-invest alongside with the Technion, under similar terms.
- Opportunities to take part in identifying promising companies.
- Participation in cross-sectors events and programs in Israel and abroad.

## Technion Celebrates Opening of New Cornell Tech Campus on NYC's Roosevelt Island

(13/09/2017)



BUILT TO TRAIN

21ST CENTURY TE



The Guangdong Technion Israel Institute of Technology (GTIIT) in Shantou, China located in Guangdong Province is an historic partnership between the Technion and Shantou University, will offer high-level, innovative and research-oriented undergraduate and graduate education. (December 18, 2017)