

**MASTERING THE  
PATH FROM R&D TO  
MEGA-  
PROJECTS**

**Academic Director:  
Professor Jacob Nagel**



**Policy, Strategy, Resource Allocation,  
HR, Organizational Dilemmas  
and Managing the Uncertainty**



# MASTERING THE PATH FROM R&D TO MEGA- PROJECTS

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## Welcome to the MMP Workshop

A 3-day workshop (a full day per week for 3 weeks) for senior executives on the path and transition from research & development to the realization of mega projects: strategy, policy, resource allocation, HR, organizational dilemmas and managing under uncertainty.



### Goal

Theoretical and practical knowledge on strategy and policy for the management of R&D in knowledge-intensive industries.

Effective methods for allocation of resources, building unique R&D and Mega-projects human resources, organizational considerations, management under conditions of uncertainty, and the transition from R&D to mega-project management .



### Target Audience

Middle and senior level executives, with about 10 years of experience in the private or public sector.

Participants can hail from a variety of industries and roles, including:  
CEO, COO, CFO, Directors, Board members, Attorneys, Diplomats, Team leads and Project leaders.



### Schedule

25/06/2024  
02/07/2024  
11/07/2024

9:00am - 5:00pm  
Technion Sarona  
Campus, Tel Aviv

Each day will be comprised of 4 sessions and breaks.  
The workshop includes lunch and refreshments.

# MASTERING THE PATH FROM R&D TO MEGA- PROJECTS



In the coming decade, a huge increase in the number of mega-projects worldwide is expected. The causes of this phenomenon include, among other things, an increase in "mega-cities", rapid technological developments, an "information explosion", lack of resources, security needs and more. Due to high demand and successful previous workshops, we open another session of MMP workshop.

The goal of "Mastering the Path from R&D to Mega-Projects workshop" is to give senior managers theoretical and practical knowledge in strategy and policy for R&D management in knowledge-intensive industries, present methods for resource allocation, building the unique human resources required for these needs, pointing out the organizational considerations and how lead under conditions of uncertainty.

The three-day workshop will include core lectures and guest lectures by senior executives from the industry, and group discussions.

The classic development pyramid includes basic science and technologies, feasibility studies and prototypes, and full development. The academy has an important and central role in building the pyramid base, while full-scale development (FSD) is generally performed in the industry.

The connection between academia and commercial R&D entities in Israel is fundamentally different from what is generally found around the world, especially considering its relatively small size, the almost familial closeness, and the collective service in the Israel Defense Forces. These factors allow for the deeper understanding of needs, an immediate link between technological breakthroughs, market demands and innovation, for which there is no precedent in the world.

Many countries, such as the United States, Singapore, Germany, Scandinavia, the Gulf states and more, are looking for collaborations with Israel to learn up-close how things are done.

## Workshop Objectives

- ✓ Connection to Industry needs
- ✓ Theoretical and practical knowledge
- ✓ Leading instructors
- ✓ Technion excellency

## Technion - The School of Continuing Education

Technion - Israel Institute of Technology is the oldest academic institution in Israel. The Technion has set for itself the goal of promoting and developing knowledge through teaching and research in pure science and engineering, technology, medicine, management and more.

The school of Continuing Education is specializing in developing and organizing certificate programs for graduates of institutions of higher education, for engineers and for senior professionals in various branches of the industry.





## Curriculum

### Core Lectures by Professor Jacob Nagel:

#### Introduction

- Key components in R&D management methodologies and mega-project development
- The role of technology in the development of mega-systems, examples from complex systems, mostly from the defense world

#### Defense R&D

- The uniqueness of defense R&D
- NSS – National Security Strategy - The perception of defense and security in the State of Israel, its development in the last century and its influence on building Israel strength and force
- Key R&D directions, examples and emphasis on the WBW (War Between Wars) and Cyber

#### Allocation of resources

- The processes and algorithms for resource allocation based on the needs of R&D management and project development.

#### R&D strategies

- Key principles in building an organizational R&D strategy

#### Organizational aspects, human resource, and management under the conditions of uncertainty

- Organizational dilemmas and human resource development
- R&D and mega-projects management under the conditions of uncertainty
- Familiarity with families of special technologies, changing realities:
  - Supporting technologies
  - Emerging technologies
  - Converging technologies
  - Disruptive technologies



## Curriculum

### Guest Lectures:

#### The critical role of data science in the development of mega-projects

Prof. Oren Kurland

- Opportunities and risks in data-based mega-projects
- The transition from research to development and back to research
- The similarity and difference of data-based projects compared with the world of classic software development and the impact on organizational structure, unique personnel training, and ethical issues.

#### Managing mega-projects at the pace of a startup

Eti Ben-Zeev

In an era when competition in the financial world is becoming more challenging, the Time To Market of technological projects has tremendous business value. How do you manage to improve TTM in a large organization, in mega-projects, without compromising on the quality of the deliverables

#### How to think outside the box?

Dr. Eyal Hulata

Entrepreneurship, innovation and thinking out-of-the-box in R&D management and mega-projects

#### Practical management of mega-projects

Brigadier General (res.) Pini Youngman

- Multi-system development
- Complex solution
- The technological gap, investment in R&D of new and complementary technologies
- Organizational process for building the managerial structure of a mega-project
- Building detailed work plans process

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## Curriculum

### Guest Lectures:

#### From initiative to mega-project

Israel Grimberg

Transition from initiative, in Disruptive Technology fields, to mega-projects, in civilian and military realms.

#### Transition from academic research to establishing a startup

Prof. marcelle machluf

The transition from academic research to establishing a startup, especially in the field of biotech, poses many challenges to the researcher, entrepreneur, and investors. Hence, it requires rethinking from the researcher's side and from the academic side, as well as strengthening industry-academia ties, which are currently lacking. In the lecture, we will reveal insights from Prof. machluf's journey as a researcher at the Technion who founded two startups in the biotech world.

\*List of lecturers is subject to change



## Professional Credential

At the completion of the workshop, participants will receive a certificate of Completion of MMP workshop from The Technion School of Continuing Education



## Meet our lecturers:



### **Academic director: Brigadier General (Res.) Professor Jacob Nagel**

Visiting Professor at the Technion in the Faculty of Aerospace Engineering, Head of the Center for Security Science and Technology (CSST), Senior fellow at FDD, with 40 years of experience in government and intelligence (IDF, MOD and the Prime Minister's Office) in a variety of roles. In the years 2016-2017, he was the National Security Adviser to Prime Minister Benjamin Netanyahu and the acting head of the National Security Council. Nagel was the scientific deputy of the Directorate for Defense Research and Development and acting head of Military R&D in the Ministry of Defense and performed a wide range of technological and commanding positions in Unit 8200.

Among his duties he headed the "Nagel Committee," which recommended the development of the Iron Dome system in 2007, signed on behalf of The State of Israel on the \$38 billion MOU agreement with the United States in 2016, and headed the team of Israeli experts working with world powers during the discussions on the Iranian nuclear agreement.



### **Israel Grimberg**

Co-founder of Team8. The company was established with the aim of building start-up companies with an innovative and groundbreaking method and approach called 'It takes a village to raise a company' in the fields of cyber, fintech and other realms like health, digital and energy.

In his previous position, he commanded the Cyber Center in Unit 8200 and was one of the generators of the Cyber Revolution in the unit and in the IDF in the early 1990s, including the management of mega-projects in the cyber field, with significant national impact. Today, in addition to his business activities, Israel pursues doctoral studies in philosophy at Tel Aviv University and, together with intelligence alumni and other business people, founded a philanthropic organization in the field of education.



### **Eti Ben-Zeev**

In charge of the technology division at Bank Hapoalim, deputy to the CEO. Leads all technological activities in the bank, in an era where technology defines and leads the world of banking. Eti leads mega projects, including digital transformation, modernization of core systems, implementation of advanced technologies, and more.

She joined Bank Hapoalim in 2010, after about 20 years in unit 8200, where she led the large and central technological entities in the unit.





## Meet our lecturers:



### **Prof. Oren Kurland**

A faculty member in the Faculty of Data and Decision Sciences of the Technion. One of the leading data researchers in the world.

Professor Kurland serves as editor and a senior member of leading international journals and conferences in the fields of AI and information retrieval.



### **Brigadier General (Res.) Pini Youngman**

Senior Vice President and Head of Air Defense Systems Division at Rafael since 2017.

In the past, he served as director of Rafael's missile defense systems and was involved in the design, development, production, and execution of "Iron Dome" and "David's Sling". Prior to joining Rafael, he served for 28 years in the Air Force in various command and staff positions.



### **Prof. marcelle machluf**

A faculty member in the Faculty of Biotechnology and Food Engineering of the Technion, one of the top researchers in the field of nanotechnology. The laboratory led by her is engaged in applied research in the fields of tissue engineering, genetic therapy, and drug transport, while integrating scientific and engineering knowledge. In addition, she founded companies that deals with the production and cultivation of stem cells and the creation of cultured meat.



### **Dr. Eyal Hulata**

Former National Security Adviser to Prime Minister Bennet. Talpiot program alum. Senior international fellow at FDD.

He was the CPO at PAGAYA Fintech company and an entrepreneur in the field of global warming reduction technologies. He previously served as technology unit chief in the public service.





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## ABOUT THE VENUE

### Azrieli Sarona Tower

Azrieli Sarona Tower is the tallest skyscraper in Israel, located in the heart of Tel Aviv, adjacent to the Technion Sarona campus.

The workshop will be held in Technion's new auditorium, located on the 29th floor of the tower, facing the city's unique landscape and amazing urban views.

With its advanced technological systems, the auditorium regularly hosts executive workshops and conferences for senior professionals at the highest level.

**Address:** 121 Menachem Begin Road, 29th floor, Tel Aviv-Yafo.

For those arriving by train, get off at the Tel Aviv HaShalom station.



\* If necessary, there may be a change in the location of the seminar for a spacious classroom in The Technion campus in Sarona, Tel Aviv



Costs of the workshop include all course materials, refreshments



Second and subsequent enrollments from the same organization receive a 1,000 NIS discount

\* No double discounts



Early bird registration: 8,000 NIS plus VAT (480 NIS registration fee)

Regular price: 9,200 NIS plus VAT (480 NIS registration fee)

To apply for the workshop  
Please contact Ariel Lipa  
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Mail: [ariel@trdf.technion.ac.il](mailto:ariel@trdf.technion.ac.il)