

THE 11TH
INDIA ISRAEL
FORUM

5-6 DECEMBER 2018 | NEW DELHI, INDIA

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ABOUT THE ORGANISERS



Ananta Aspen Centre is a non-partisan and not-for-profit organization that focuses on values-based leadership development and open dialogue on important issues facing Indian society, to help foster its transformation. The organization has no political affiliation and serves to provide a platform and forum that engages civil society, business, governments and other stakeholders on issues of importance to India's development and national security.

Ananta Aspen Centre is an independent non-profit organization registered under the Indian Trusts Act and under 12A and 80G of the Income Tax Act.



Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, playing a proactive role in India's development process. Founded in 1895, India's premier business association has around 9000 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from around 265 national and regional sectoral industry bodies.

CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, healthcare, education, livelihood, diversity management, skill development, empowerment of women, and water, to name a few.

As a developmental institution working towards India's overall growth with a special focus on India@75 in 2022, the CII theme for 2018-19, **India RISE : Responsible. Inclusive. Sustainable. Entrepreneurial** emphasizes Industry's role in partnering Government to accelerate India's growth and development. The focus will be on key enablers such as job creation; skill development; financing growth; promoting next gen manufacturing; sustainability; corporate social responsibility and governance and transparency.

With 65 offices, including 9 Centres of Excellence, in India, and 10 overseas offices in Australia, China, Egypt, France, Germany, Singapore, South Africa, UAE, UK, and USA, as well as institutional partnerships with 355 counterpart organizations in 126 countries, CII serves as a reference point for Indian industry and the international business community.

Confederation of Indian Industry

The Mantosh Sondhi Centre

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Reach us via our Membership Helpline: 00-91-124-4592966 / 00-91-99104 46244

CII Helpline Toll Free Number: 1800-103-1244



Located at the heart of Israel's high-tech and cultural center, Tel Aviv University (TAU) represents Israel at its best – dynamic, innovative and forward-looking.

TAU was established in 1956 as a small local college. It has since evolved into Israel's largest and most influential research university, with 30,000 students enrolled in 130 schools and departments across the spectrum of sciences, humanities and arts. TAU excels in the area of entrepreneurship and innovation; it ranks among the top 10 schools in the world – and the only one outside the United States – for producing successful, VC-backed startup founders (Pitchbook).

Other recognized centers of excellence are brain studies, nanoscience, renewable energy, cyber security, big data, film, and Biblical archeology, among others. TAU's cutting-edge scientific advances are reinforced through ties with prominent research institutions ranging from the NIH, NASA and Harvard to the Sorbonne and Tsinghua University. The University also puts tremendous emphasis on globalizing its campus, offering 20 international programs in English that attract over 2,000 students from 60 countries annually.

Message from the Co-Chairs

Dear delegates,

We have reached a small milestone, we are now past double figures and almost teenagers.

This Forum has proved to be remarkably resilient over its 11 years history. We as a group have sought to improve bi-lateral ties and understandings and in doing so we have “lifted the tide for all boats.” The resilience of our process is no doubt thanks to the dedicated delegates who have come year after year, demonstrating their commitment to improving ties between our two countries. We thank you for making the time and effort to be with us for the coming two days.

This year marks some important transformation for the Forum. The meeting marks the last Forum for Professor Joseph (Yossi) Klafter as President of TAU. 8 years ago, Yossi attended his first Forum in this very hotel and even got to drive a Tata Nano on that occasion. You came as a sceptic and went home a zealous convert. Your commitment and dedication to Forum and developing ties for TAU with India were remarkable. TAU has been richly rewarded for this and you have created a legacy for your successors. Both Ananta Aspen and Confederation of Indian Industry and your many friends in India have come to appreciate your sincere commitment to our country and our efforts.

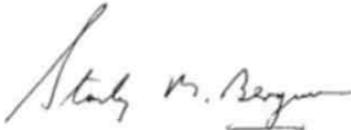
Also, our founding chair and the architect and champion of this effort, Tarun Das, has handed over his role as Co-Chairman of the Forum.

We are truly indebted to Yossi and Tarun for their legacy and leadership. Israel and the India-Israel axis could not have asked for better advocates.

We would like to thank our generous sponsors and the dedicated people who have worked tirelessly to make this event happen.

We wish you successful and meaningful deliberations.

Stanley M. Bergman



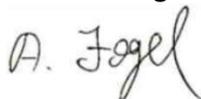
CEO and Chairman,
Henry Schein Inc

Jamshyd Godrej



Chairman of the Board,
Godrej and Boyce Manufacturing Co Ltd

Aharon Fogel



Chairman,
ZIM Integrated Shipping Services Limited

Nikhil Sawhney



Vice Chairman and Managing Director of Triveni
Turbine Limited and Director, Triveni
Engineering and Industries Limited

11th India-Israel Forum

5th – 6th December 2018 | The Taj Palace Hotel, New Delhi

Agenda (as on 3rd December)

Day 1: Wednesday, 5th December 2018

09:30 – 12:45 hrs Indo – Israel Expert Group Meeting on Electronics (with focus on Semi-Conductors)
(For Expert Group Members Only)

13:00 – 14:00 hrs **Arrival of Forum Participants and Lunch**

14:00 – 14:15 hrs **Opening Remarks by the Co-Chairs**

- Jamshyd Godrej
- Stanley Bergman
- Aharon Fogel
- Nikhil Sawhney

14:15 – 14:45 hrs **Self-Introduction of Participants**

14:45 – 16:15 hrs **Session 1: Future of Indo-Israel relations – A roadmap for next ten years**

Session Chairs: Stan Bergman and Tarun Das

Presenters:

- Israel Makov
- Nikhil Sawhney

Presentation on Bilateral Trade Study:

- Adiv Barcuh
- Chandrajit Banerjee

16:15 – 16:30 hrs **Refreshment Break**

16:30 – 18:00 hrs **Session 2: Geopolitical developments in West Asia and contemporary global trends and dynamics**

Session Chairs: Aharon Fogel and KRS Jamwal

Presenters:

- Asher Susser
- S K Lambah
- Isaac Ben Israel
- Pramit Pal Chaudhuri

18:00 – 19:30 hrs **Session 3: Defense and strategic cooperation**

Session Chairs: Giora Yaron and Anil Kumar Verma

Presenters:

- Ophir Shoham
- Air Marshal K K Nohwar
- Isaac Ben Israel
- Rajinder Bhatia

19:45 hrs **Opening Dinner hosted by Nikhil Sawhney**, Vice Chairman and Managing Director of Triveni Turbine Limited and Director, Triveni Engineering and Industries Limited

Chair: Jamshyd Godrej

Day 2: Thursday, 6th December 2018

08:45 hrs **Arrival of Delegates**

09:00 – 09:30 **Report back on expert's seminar**

- Eli Tidhar
- Salil Singhal

09:30 – 11:00 hrs **Session 4: Education and Research Collaboration: Lifting the tide for Academic and Research Cooperation**

Session Chairs: Joseph Klafter and KRS Jamwal

Presenters:

- K. Vijay Raghavan
- Benny Geiger

- Devang Khakhar
- Itamar Glazer
- Raghuttama Rao

11:00 – 11:15 hrs

Refreshment Break

11:15 – 12:45 hrs

Session 5: Agriculture and Food Security cooperation: Enhancing productivity and efficiency

Session Chairs: Israel Makov and Salil Singhal

Presenters:

- Itamar Glazer
- Sudhir Mehta
- Nir Gilad
- Rohtash Mal

12:45 – 13:15 hrs

Concluding session

13:30 – 15:00 hrs

Closing Lunch hosted by Mr. Jamshyd Godrej, Chairman of the Board, Godrej and Boyce Manufacturing Company Ltd

16:00 – 17:30 hrs

Public session: INDIA ISRAEL TIES: PROSPERITY THROUGH PARTNERSHIP

Chair – Tarun Das

Speakers:

- Stan Bergman
- Jamshyd Godrej
- Nikhil Sawhney
- Joseph Klafter

18:15

Departure from the Hotel

19:00

Dinner Hosted by **Mr. Salil Singhal**, Chairman of PI Industries Ltd
Venue: Singhal Farm House, Rajokri, New Delhi 110038

GUIDELINES

Chairs:

An Indian and an Israeli will chair each session. One chair will introduce the session and the presenters. That chair will also direct the conversation between and following the presentations. His co-chair is welcome to help. The introductory remarks should be no more than 5 minutes long and provide the broader context and the introductions.

The chair who is closing the session is required to encapsulate the key issues that emerged and identify any practical and policy follow ups. Again, we ask that the chair take no more than 5 minutes.

Presenters:

The presenters in each session are requested to address the topic at hand in 7-8 minutes at the outset. We request every participant to engage in the discussions. The idea is to stimulate conversation and add new perspectives and ideas. A special request for all those who are making presentations. It is recommended that we do not go into history and all presentations are forward-looking and have some specific suggestions for action.

Coordination among Chair and Presenters:

We would like to encourage the co-chairs and presenter to discuss the structure and flow of their session by telephone or email ahead of the meeting on 5th December. We would be happy to share the contact details as necessary.

LIST OF PARTICIPANTS

ISRAEL

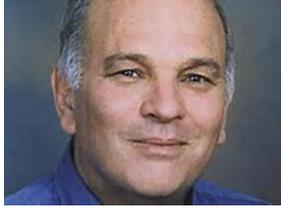
1. **Aharon Fogel**, Chairman, ZIM Integrated Shipping
2. **Stan Bergman**, CEO and Chairman, Henry Schein
3. **Adiv Baruch**, Chairman of the Israel Export & International Cooperation Institute, Chairman of Jerusalem Technology Investments Ltd and Maayan Ventures
4. **Prof. Isaac Ben Israel**, Chairman, Israel Space Agency
5. **Prof. Benny Geiger**, Chairman, Israel Science Foundation. Department of Molecular Cell Biology, Weizman Institute
6. **Nir Gilad**, Founder and CEO, Agamner Project Ltd
7. **Prof. Itamar Glazer**, Deputy Director for R&D, Agriculture Research Organization
8. **Prof. Joseph Klafter**, President, TAU
9. **Israel Makov**, Chairman, Sun Pharma
10. **Prof. Yaron Oz**, Rector, TAU
11. **Prof. Raanan Rein**, Vice President, International, TAU
12. **Dr. Hadar Ron**, Founding Partner, Israel Health Care Ventures
13. **Ophir Shoham**, Former Director of Defense R&D Directorate in IMOD/IDF and Managing Partner Mida Ventures
14. **Prof. Asher Susser**, Senior Fellow, Moshe Dayan Center for Middle Eastern Studies, Tel Aviv University
15. **Eli Tidhar**, Partner, Strategy Consulting Deloitte, Consumer and Industrial Products Leader, Deloitte Consulting
16. **Dan Vilesnski**, Former Chairman/CEO of Applied Materials Israel, Former CEO KLA-Tencor Israel, Board Member at Israeli National Nanotechnology Initiative
17. **Dr. Giora Yaron**, Chairman of the Executive Committee, TAU

Observers:

1. **Prof. Yosi Shacham**, The Bernard L. Schwartz chair for nano scale information technologies, Department of Electrical Engineering
2. **Ofer Gol**, Business Development Manager at Kidum, Tech Transfer of ARO Agricultural Research Organization, Ministry of Agriculture, State of Israel
3. **Danna Mattes-Appelrot**, Head, Asia Desk, TAU International
4. **Gary Sussman**, TAU Forum Coordinator

Profiles of Israeli Participants

Mr. Aharon Fogel, Chairman, ZIM Integrated Shipping Services Ltd (**Co-Chair**)



Aharon Fogel is the current chairman of Chairman, ZIM Integrated Shipping Services Ltd., a leadership role he assumed in 2014. He is also the Chairman of Greenonyx, an Israeli startup company developing a revolutionary in-door automated food platform. Mr. Fogel is also currently a member of the board of IDI Insurance, Israel's leading direct insurance provider.

Mr. Fogel has previously chaired leading Israeli companies:

- IDB Development Ltd.
- Ness Technology
- Leumi Partners & Board member Leumi Bank

He was also a partner and founder of Jerusalem Venture Partners, one of Israel's leading venture capital groups. His current public / charitable leadership roles include, chairing;

- The Israeli Philharmonic Orchestra
- Chairman Advisory Board Bank of Israel

He also serves on the Executive Council of Tel Aviv University.

Prior to his career in the private sector, Mr. Fogel had a distinguished calling in the public sector, serving thrice as Director General of the Ministry of Finance. He worked in the Ministry of Finance for over two decades. Prior to joining the Ministry in 1973, her served as a research assistant in the Bank of Israel.

Mr. Fogel has a B.A. in Economics and Statistics from the Hebrew University, Jerusalem.

Mr. Stanley M. Bergman, CEO and Chairman, Henry Schein (**Co-Chair**)



Since 1989, Stanley M. Bergman has been Chairman of the Board and CEO of Henry Schein, Inc., a Fortune 500® company and the world's largest provider of health care products and services to office-based dental, animal health, and medical practitioners, with more than 22,000 Team Schein Members

and operations or affiliates in 34 countries. Henry Schein is a member of the S&P 500® and Nasdaq 100® indexes. In 2017, the Company's sales reached a record \$12.5 billion.

Henry Schein has been a Fortune World's Most Admired Company for 17 consecutive years.

Mr. Bergman serves as a board member or advisor for numerous institutions including New York University College of Dentistry; the University of Pennsylvania School of Dental Medicine; the Columbia University Medical Center; University of the People; Hebrew University; Tel Aviv University; the University of the Witwatersrand Fund; The World Economic Forum's Health Care Governors; the Business Council for International Understanding, the Japan Society and the Metropolitan Opera. Mr. Bergman is an honorary member of the American Dental Association and the Alpha Omega Dental Fraternity. Mr. Bergman is the recipient of the Ellis Island Medal of Honor; the CR Magazine Corporate Responsibility Lifetime Achievement Award; the 2017 CEO of the year award by Chief Executive Magazine; Honorary Doctorates from The University of the Witwatersrand, Western University of Health Sciences, Hofstra University, A.T. Still University's Arizona School of Dentistry and Oral Health, Case Western Reserve University and Farmingdale State College (SUNY); and Honorary Fellowship from King's College London - Dental Institute and the International College of Dentists.

Stan and Marion Bergman and their family are active supporters of organizations fostering the arts, higher education, cultural diversity and grassroots health care and sustainable entrepreneurial economic development initiatives in the United States, Africa and other developing regions of the world. Mr. Bergman is immediate past President of the American Jewish Committee, Co-Founder of the India-Israel Forum and Co-Chair of the AJC Muslim-Jewish Advisory Council.

Mr. Bergman is a graduate of The University of the Witwatersrand in South Africa, and is a South African Chartered Accountant and a NYS Certified Public Accountant (CPA).

Adiv Baruch, Chairman of the Israel Export & International Cooperation Institute, Chairman of Jerusalem Technology Investments Ltd and Maayan Ventures



Adiv Baruch, has been involved in the High-tech industry for the last 32 years. Currently, Mr. Baruch is the Chairman of Institute of Technology and Innovation, which is a leader in educating technology professionals and innovative entrepreneurs.

Mr. Baruch served as Chairman of the public committee of the Hi-Tech and Telecom Division at the Israel Export and International Cooperation Institute (IEICI), and he was a member of the audit committee of the board of IEICI.

Previously, Mr. Baruch was one of the founders of Ness Technologies, grown the company to become the first Israeli IT service company into a Global IT services company.

Mr. Baruch has served as President for Nyotron, a global cyber technology company, and served as a director of the Bank of Jerusalem, and he serves or has served on the boards of a variety of charitable organizations including Make-AWish Foundation and is currently active Chairman of Or-Lachayal. Also, Mr. Baruch is an active member of the Young President Organization (YPO) Israel chapter.

Mr. Baruch has global experience and is involved with variety of companies on the US, Tel Aviv and Hong Kong exchanges.

Mr. Baruch served in the Israeli Navy and holds an Engineering degree from The Technion, the leading engineering institute in Israel.

Major Gen. (Res.) Professor Isaac Ben-Israel, Chairman, Israel Space Agency



Isaac Ben-Israel was born in Israel (Tel-Aviv), 1949. He studied Mathematics, Physics and Philosophy at Tel-Aviv University, receiving his Ph.D. in 1988.

He joined the Israel Air Force (IAF) after graduating high school (1967) and has served continuously up to his retirement (2002).

During his service, Isaac Ben-Israel has held several posts in operations, intelligence and weapon development units of the IAF. He headed the IAF Operations Research Branch, Analysis and Assessment Division of IAF Intelligence, and was the Head of Military R&D in Israel Defence Forces and Ministry of Defence (1991-1997). In January 1998 he was promoted to Major General and appointed as Director of Defence R&D Directorate in IMOD. Under this hat he was also in charge of the development of Human Technological Capital, including "Talpiot", "Psagot" and "Atidim". During his service he received twice the Israeli Defence Award.

After retirement from the IDF Isaac Ben Israel joined the University of Tel-Aviv as a professor and was the head of Curiel Centre for International Studies (2002-2004), the head of the Program for Security Studies (2004-2007, 2010-), Executive Director of the Interdisciplinary Centre for Technological Analysis & Forecasting at Tel-Aviv University (ICTAF) (2010-2013), Deputy Director of the Hartog School of Government and Policy in Tel-Aviv University (2005-2015) and a member of Jaffe Centre for Strategic Studies (2002-2004). In 2002 he founded and headed the Yuval Ne'eman Workshop for Science, Technology and Security at Tel Aviv University. In 2014 he founded the Blavatnik interdisciplinary Cyber Research Center at Tel-Aviv University. He was a member of the Board of Trustees of Ariel University Centre (2009-2011), and a member of the advisory council of Neaman Institute for Advanced Studies in Science and Technology at the Technion (2000-2010).

In 2003 he founded RAY-TOP (Technology Opportunities) Ltd, consulting governments and industries in technological and strategic issues.

Professor Ben-Israel was a member of the 17th Knesset (Israeli Parliament) between June 2007 and February 2009. During this period, he was a member of the Security and Foreign Affairs Committee, the Finance Committee, the Science & Technology committee, the Chairman of the Homeland Security Sub Committee and the Chairman of the Israeli-Indian Parliamentary Friendship Association. Isaac Ben Israel was a member of the board of directors of IAI (2000-2002), the board of the Israel Corp. (2004-2007), the R&D advisory board of TEVA (2003-2007), member of the advisory board of Ne'eman institute at the Technion (2000-2010), Chairman of the Technion Entrepreneurial Incubator (2007), and member of the advisory board of Red Dot.

He was the Chairman of Israel National R&D council in 2010-2016.

In 2011 he was appointed by the Prime Minister to lead a task force that formulated Israel national Cyber policy. Following that he founded the National Cyber bureau in the PM Office. In 2014 he was appointed again by the PM to lead another task force which resulted in a government decision (February 2015) to set up a new National Cybersecurity Authority.

Professor Ben-Israel has written numerous papers on military and security issues. His book Dialogues on Science and Military Intelligence (1989) won the Itzhak-Sade Award for Military Literature. His book on The Philosophy of Military Intelligence had been published by the Broadcast University (1999) and has been translated into French (2004). His book Science, Technology and Security: From Soldiers in Combat up to Outer Space, was published in 2006. His book on Israel Defence Doctrine was published in 2013. His book on Cyber Security in Israel was published by Springer in 2015.

Isaac is married to Inbal (née Marcus) and they have three sons: Yuval (1981), Roy (1984) and Alon (1988).

Current Positions:

- Chairman of Israel Space Agency (since 2005).
- Professor at Tel-Aviv University, teaching at the Security Studies Program (since 2002) and at the Cohen Institute for the History & Philosophy of Sciences and Ideas (since 1989).
- Positions at Tel-Aviv University:
 - * Head of Security Studies Program (since 2004-2007, 2010-).
 - * Head of the Blavatnik Interdisciplinary Cyber Studies Centre (since 2014)
 - * Head of the Yuval Ne'eman Workshop for Science, Technology and Security (since 2002).
- Member of the board of Fisher Institute for Air and Space Strategic Studies (since 2000)
- Member of the academic council of Afeka - Tel-Aviv Academic College of Engineering (since 2003)
- Founder and CEO of RAY TOP Technologies Ltd. (since 2002)
- Founder and CEO of RAY TOP SINGAPORE Pte. Ltd. (since 2003)
- Partner at Cyber Security Group - CSG (since 2016)
- Chairman of Arma Ferrea (since 2017)
- Member of Bank-of-Israel's Committee for selecting members of the Board for banks (since 2016)
- Member of EMET Award Committee (since 2011)

Positions and Memberships abroad:

- Member of IAA – International Academy of Astronautics (since 2012)
- Member of Singapore RIEC - Research, Innovation and Enterprise Council (since 2012)
- Member of the Board of the Agency for Science, Technology & Research in Singapore - A*STAR (since 2013)
- Commissioner at GCSC - Global Commission on the Stability of Cyberspace (since 2017)

Prizes and Awards:

- 1972 Israel Defence Award, for developing an airborne weapon delivery system for F-4E.
- 1976 Israel Air Force Award, for developing a C⁴ system.
- 1984 IDF Director of military Intelligence Prize for Creative Thinking.
- 1990 Itzhak-Sade Award for Military Literature, for the book *Dialogues on Science and Military Intelligence*.
- 2001 Israel Defence Award (Second time), for a project introducing a new concept of future warfare.
- 2002 Singapore Defence Technology Distinguished Award for his "outstanding contribution to bilateral defence relations between Israel and Singapore".
- 2008 Lions "Man of Excellence", for his contribution to Israel Security.
- 2017 Knighthood from Italy (L'ONORIFICENZA DI UFFICIALE, ORDINE DELLA STELLA DITALIA)

Professor Benjamin Geiger, Chairman, Israel Science Foundation. Department of Molecular Cell Biology, Weizmann Institute



Born in Israel, Prof. Benjamin Geiger conducted his undergraduate studies at Tel Aviv University, and his MSc studies in Immunology at the Hebrew University of Jerusalem. In 1977, he was awarded a PhD degree in Chemical Immunology from the Weizmann Institute of Science. He undertook postdoctoral research at the University of California, San Diego. In 1979, Prof. Geiger returned to Israel and joined the Weizmann Institute's Department of Chemical Immunology. Prof. Geiger has held a number of senior posts at the Weizmann Institute, among them Dean of the Feinberg Graduate School (1989-1995), Founder and Head of the Department of Molecular Cell Biology (1996-2004), and Dean of the Faculty of Biology (2004-2009). He is the incumbent of the Erwin Neter Professorial Chair in Cell and Tumor Biology.

Prof. Geiger focuses on the mechanisms responsible for communication between cells, both normal and cancerous. He is attempting to identify and trace the specific molecules involved in cell adhesion and communication, and to investigate the molecules and signaling processes that regulate cell migration, proliferation, gene expression, survival and environmental sensing. His research is revealing new and important insights about a range of biological processes, including cancer metastasis, bone formation and resorption, immune cell activation and more. He has patented several of his findings, including pharmaceutical agents for the treatment of glaucoma, methods relevant to cancer therapeutics, and automated microscopic techniques.

Prof. Geiger served as President of the Israel Cell Biology Organization, the Israel Society for Microscopy, the European Cytoskeletal Forum, and various other European scientific initiatives. He chaired the Life Science and Medicine Section of the Israel Science Foundation (ISF), the major funding source for basic research in Israel between 2003 and 2009, and in 2009, was named ISF Chair, a position he holds until this day.

Among his many honors are the Fogarty Scholar-in-Residence Award of the NIH (1993-1997), EMBO membership, the Eleanor Roosevelt Cancer Research Fellowship (1987-1988), the FEBS Prize (1984), and the Levinson Prize (1983).

Prof. Geiger is married to Selly and is father to Anat, Tami, and Avner, and grandfather to Yotam, Shira, Ayala and Or.

Nir Gilad, Founder and CEO, Agamner Project Ltd



Nir Gilad is the founder and CEO of Agamner Project Ltd. as of 2017. He is an active investor in several business ventures in the field of regular and marine agriculture and serves as Chairman and Investor of Start Up in the field of industrial safety within the framework of industry 4.0 revolution.

Prior to his current position he served as Chairman of the Board of ICL between January 2008 - August 2016.

He also serves as a Director of Oil Refineries Ltd. Since December 2013.

Until early 2015, Mr. Gilad was President and CEO of Israel Corp., and, prior thereto, Deputy CEO for Business Development and Strategy. He also held a number of other positions including Chairman of ZIM Integrated Shipping Services LTD, IC Power Israel Ltd., IC Green Energy Ltd. and H.L. Management and Consulting (1986) Ltd. Mr. Gilad also acted as a Director of companies held by Israel Corp., including Tower Semiconductor Ltd. and Qoros Automotive Co. Ltd. (formerly known as Chery Quantum Auto Co. Ltd. 2007) Ltd.

Prior to joining Israel Corp. Mr. Gilad was a Senior Vice President of Migdal Insurance Company, CEO of Migdal Investment Management Ltd. and Chairman of Migdal Capital Markets Ltd. Mr. Gilad also served as the Accountant General and Deputy Head of the Budget Division of Israel's Ministry of Finance, where he played a role in negotiating Israel's peace accords with Jordan and the Palestinian Authority. In addition, he initiated and directed strategic programs for the Israel government aimed at improving Israel's Negev and Galilee regions.

He also served as CFO of Israel Aircraft Industries.

Mr. Gilad holds an MBA in Business Administration from Bar Ilan University and a BA in Economics, Agricultural Administration and Natural Sciences from the Hebrew University, Jerusalem. He has also completed the Harvard Business School-Executive Education- Advanced Management Program. Harvard AMP

Mr. Gilad holds the rank of Lieutenant Colonel in the IDF reserves. He is active in Yedidey Atidim Association, a non-profit organization that integrates underprivileged communities into the higher education system and Daroma-tzafona.org.il, was the Chairman of the Friends of Soroka Medical Center Association, and a Director of IDC Herzliya, a pioneering academic institution of higher education in Israel.

Professor Itamar Glazer, Deputy Director for R&D, Agriculture Research Organization



Prof. Itamar Glazer is the Scientific director of ARO (Agricultural Research Organization), the "Volcani Center". The "Volcani Center" is one of the leading Ag-research institutes worldwide in innovation and technology transfer. Prof. Glazer will present an overview of the current activities at the ARO regarding the challenges of food security and safety predicted to confront the world by 2050. Examples include approaches for increasing yield and cultivation productivity as well as improving food losses management.

Prof. Glazer is a world renowned scientists in the field of biological control agents against pests. He was involved in the development of new products and technologies in this field. – He is an affiliated Professor at the Hebrew University, in the Faculty of Agriculture and Environmental Sciences.

From 2000-2006, Prof. Glazer was the director of "Kidum", the Technology Transfer Office and from 2007-2014 was the director of "The Plant Sciences Institute" of Volcani Center.

Prof. Glazer has vast experience in the initiation, development and transfer to industry of a wide range of scientific innovations.

Professor Joseph Klafter, President, Tel Aviv University



Professor Joseph Klafter was named President of Tel Aviv University in 2009, the eighth since TAU's founding in 1956. Widely recognized in his field, chemical physics, he served as the chairman of the Israel Science Foundation (ISF), the main institution supporting scientific research in Israel, from 2002 to 2009.

Professor Klafter has published close to 400 scientific articles, edited 18 books and is the co-author of *First Steps in Random Walks: From Tools to Applications* (Oxford University Press, 2011). He has been a member of the editorial boards of numerous scientific journals and a member of the scientific committees of dozens of conferences.

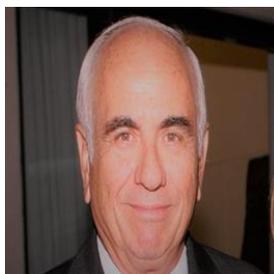
In 2011, The American Academy of Arts and Sciences elected him an honorary member, and he is also a fellow of the American Physical Society. Professor Klafter has won many prestigious prizes in his

field, including the Alexander von Humboldt Foundation Prize, the Weizmann Prize for Sciences, the Rothschild Prize in Chemistry, and the Israel Chemical Society Prize. He also holds an honorary doctorate from Wroclaw University of Technology, Poland.

Professor Klafter completed his BSc and MSc in physics at Bar-Ilan University, and his PhD in chemistry at Tel Aviv University. After post-doctoral studies in chemistry at MIT, he joined the research and engineering division of Exxon in the US, where he worked for eight years. He joined the TAU Raymond and Beverly Sackler School of Chemistry in 1987, and was promoted to full professor in 1989. From 1998 to 2003 he was the incumbent of the Gordon Chair in Chemistry, and from 2003 onward he has held the Heineman Chair of Physical Chemistry.

Currently he chairs the Committee of University Head of Israel (“VERA”).

Mr. Israel Makov, Chairman, SUN Pharmaceutical



Mr. Israel Makov is Chairman of SUN Pharmaceutical Industries Limited - the world's 5th largest specialty generic pharma company, the Chairman of BioLight Life Sciences Ltd. – an emerging global ophthalmic company focused on the discovery, development and commercialization of products for ophthalmic conditions and Chairman of Micromedic Technologies Ltd. - a cluster of companies engaged in cancer diagnostics.

Mr. Makov is the former Chairman of Given Imaging - the developer and world's leading provider of capsule endoscopy and Netafim - the pioneer and global leader in smart irrigation solutions.

Mr. Makov is the former President & CEO of Teva Pharmaceutical Industries Ltd. He led the company's global expansion and under his leadership Teva became the undisputed global leader in the generic pharmaceutical industry and a global leader in the treatment of Multiple sclerosis.

Mr. Makov is a member of the Executive Board & Management Committee of the Weizmann Institute of Science, on the Board of Governors of the Technion – Israel Institute of Technology and President of the Friends of Schneider Children's Medical Center of Israel. Mr. Makov is also Chairman of the Friends of Gesher Theatre, one of Israel's leading theaters, and is involved in many other charitable activities.

Professor Yaron Oz, Rector, Tel Aviv University



Professor Yaron Oz was named the Rector of Tel Aviv University in 2015. He completed, summa cum laude, two B.Sc. degrees in Electrical Engineering and in Physics, an M.Sc. and a Ph.D. in Physics at the Technion.

Professor Oz was a Post-Doctoral Fellow at UC Berkeley. During the years 1998-2002, he worked as a staff member at the research institute CERN in Switzerland. He joined the School of Physics and Astronomy at Tel Aviv University as a Professor in 2001.

During 2006-2011, he served as head of School of Physics and Astronomy, and during 2011-2015, as Dean of the Raymond and Beverly Sackler Faculty of Exact Sciences at Tel-Aviv University.

The research fields of Professor Oz are high energy particle physics, quantum field theories and supersymmetry, classical and quantum gravity and superstrings. He has made important contributions to those fields, publishing about 140 scientific papers and lecturing in about 150 international conferences.

Professor Oz is the incumbent of the Yuval Neeman Chair in Physics. He was awarded the Alexander von Humboldt Research Prize and held the Chair of the ISF Research Center of Excellence in Basic Interactions.

Professor Oz has been the recipient of numerous research grants and is a member of the I-CORE in the Quantum Universe. He has supervised more than 40 graduate students and post-doctoral fellows, and as Invited Professor, he lectured at numerous universities and research institutes, such as the College de France in Paris and the Simons Center in US. Professor Oz has been a member of the Scientific committee of many international conferences.

Professor Oz is the President of the Israel Physical Society, an Editor of the Journal of High Energy Physics, the Chair of the National Committee for Pure and Applied Sciences of the Israeli Academy of Sciences and a member of the National High Energy Committee.

Professor Raanan Rein, Vice President, International, Tel Aviv University



Prof. Raanan Rein is the Elías Sourasky Professor of Latin American and Spanish History and Vice President of Tel Aviv University. He is also the Head of the S. Daniel Abraham Center for International and Regional Studies.

Rein is the author and editor of more than 25 books (with leading publishers, such as Stanford University Press, Pittsburgh University Press, and the University of New Mexico Press) and one hundred book chapters and articles in academic journals. He is a member of Argentina's National Academy of History, and co-President of the Latin American Jewish Studies Association (LAJSA). The Argentine government awarded him the title of Commander in the Order of the Liberator San Martin for his contribution to Argentine culture

Prof. Rein is the editor of two book series and sits on the editorial board of ten academic journals. Research interests: Modern Latin America, populist movements, Argentine society and politics, Jews in the Spanish speaking world, ethnic minorities in Latin America, immigration and collective identities, 20th century Spain.

Dr. Hadar Ron, Founding Partner, Israel Health Care Ventures



Dr. Hadar Ron is the founding partner of Israel Healthcare Ventures Ltd. IHCV, Israel's prime Life Science Venture Capital Fund and the active chairperson of Supplant the world leader in the field of data-driven smart agriculture. Israel HealthCare Ventures (IHCV) focuses on investing in Israeli and Israeli related companies in the field of medical devices, biotechnology, pharmaceutical and medical related IT, with close to \$200 million under management, is headquartered in Tel Aviv.

IHCV was founded in 2000 together with prominent US and European investors from the pharmaceutical and financial services worlds. To date, IHCV I and IHCV II have invested in more than 27 companies and had several exits with significant returns to the investors, making IHCV one of the most successful funds in the field of life science.

Dr. Ron has an extensive medical, legal and management experience gained in senior positions in the financial, insurance, legal, healthcare sectors.

Dr. Ron had spearheaded several research initiatives, she has vast experience in development, regulatory and commercialization processes in the global healthcare market.

In addition, Dr. Ron serves as a member of the advisory Board of the Momentum Fund of Tel Aviv University and a Board member of BIRAD Research and Development Company of Bar Ilan University.

Dr. Ron serves as the chairman of several companies such as Supplant and GIView and as a board member of numerous medical companies.

Dr. Ron is involved in many social and public initiatives in Israel, such as Social Finance Israel in which she is the chairs of the scientific advisory board of Social Impact Bond for the prevention of diabetes and Colon Cancer. She also supports young scientists and new immigrants. Dr. Ron acts as a Board Member of Friends of the Sackler School of Medicine, Tel Aviv University and a Board member of "Kolot" as well as a member of Women Business Leaders (WBL) International.

Dr. Ron is a physician and attorney by education. She holds MD and LLB degrees from Tel Aviv University and has studied at the School of Business Administration at Tel Aviv University.

Ophir Shoham, Former Director of Defense R&D Directorate in IMOD/IDF and Managing Partner Mida Ventures



Ophir Shoham serves as Chairman of start-up companies in the fields of Cleantech, EV motors and Cyber. Prior to that, he was Managing Partner at Mida Ventures.

Previously he served 36 years at the Israel Defense Forces (IDF) and the Israel Ministry of Defense (IMOD) and retired as a Rear Admiral.

During his career in defense he graduated the Elite Technological Leadership Program "Talpiot", graduated the Naval Officers Training Course, and held various technological, operational and staff positions accordingly. During the years he has served as a Commanding Officer of a Missile Corvette, Head of the EW & Electronic Systems Division in the Directorate of Defense Research and Development (DDR&D/MAFAT), Head of the Budget and Finance Department in the Israel Navy. In 2002, he was promoted to the rank of Rear Admiral and appointed as Head of the Planning Division in the IDF General Staff Planning Directorate and subsequently served as Head of the C4IT Division in the IDF General Staff C4I Directorate.

RADM (Retd.) Shoham served as the Director of Defense Research and Development Directorate of the IMOD/IDF during the years 2010-2016.

He holds a B.Sc. (Cum Laude) in Physics and Mathematics and an M.Sc. (Summa Cum Laude) in Applied Physics, both from the Hebrew University of Jerusalem.

Asher Susser, Senior Fellow, Moshe Dayan Center for Middle Eastern Studies, Tel Aviv University



Asher Susser is Professor Emeritus of Middle Eastern History at Tel Aviv University (TAU) and a Senior Fellow at the Moshe Dayan Center for Middle Eastern Studies at TAU. He was the Director of the Dayan Center for twelve years and taught for over thirty-five years in TAU's Department of Middle Eastern History.

He has been a Fulbright Fellow; a visiting professor at Cornell University, the University of Chicago, Brandeis University, and the Stein Family Professor of Modern Israel Studies at the University of Arizona.

His most recent book is on *The Emergence of the Modern Middle East* (2017). He also wrote inter alia *Israel, Jordan and Palestine; The Two-State Imperative* (2012); *The Rise of Hamas in Palestine and the Crisis of Secularism in the Arab World* (2010); *Jordan: Case Study of a Pivotal State* (2000) and *A Political Biography of Jordan's Prime Minister Wasfi al-Tall* (1994, reissued in 2017). His online course on *The Emergence of the Modern Middle East* has been taken by more than 90,000 students in over 160 countries. The companion volume for the course was published in 2017.

Eli Tidhar, Partner, Strategy Consulting Deloitte, Consumer and Industrial Products Leader, Deloitte Consulting



Throughout his eighteen years of professional career in management consulting, Eli has led projects relating to the development of strategic plans, portfolio optimization, business growth initiatives, global expansion plans, go-to-market strategies and many other complex consulting projects. is known for his collaborative style, strategic thinking and ability to structure and deliver projects. He remains very current on industry trends and maintains an extensive global network of resources. Eli is leading

Deloitte Israel Asia Pacific Corridor which aims to build strategic business relationships between Asia region and Israeli clients, he has assisted many MNCs onboarding to the Israeli Innovation ecosystem and building their innovation portfolio.

Eli's diverse client list includes multinational corporations and non- governmental organizations (NGOs). Eli has managed complex projects throughout Israel and Europe working with some of the industry's most recognizable companies.

Eli has a B.Sc Business Administration & Computer Science and a MA Business Administration.

Dan Vilenski, Former Chairman/CEO of Applied Materials Israel, Former CEO KLA-Tencor Israel, Board Member at Israeli National Nanotechnology Initiative



Dan Vilenski is former chairman of Applied Materials Israel, having served the company since 1997, when he began as Corporate Vice President to 2006.

Mr. Vilenski is responsible for the successful integration in Israel of three independent subsidiaries for leading American high-tech companies: Kulicke and Soffa (K&S), KLA Instruments and Applied Materials. All three firms operate in the field of semiconductor capital equipment and employ a combined total of 1500 employees in Israel.

Mr. Vilenski served for four years (1993-1996) as Executive Director of the Israel - US joint Bi-national Industrial Research and Development (BIRD) Foundation, spearheading innovative industrial cooperation between Israeli and US high tech companies. During the period of his management, the BIRD Foundation created about 160 unique cooperation programs, many of which proved highly beneficial. He is a familiar figure among Israeli industrialists and continues to support Israel's Ministry of Trade and Industry in selected activities.

Mr. Vilenski received his B.Sc. in 1964 and his Mechanical Engineering M.Sc. in 1967 from the Technion - Israel Institute of Technology in Haifa. From 1967 to 1969 he was a staff member at Carnegie Mellon University in Pittsburgh, and subsequently began as a design engineer at Kulicke and Soffa in Philadelphia. He eventually served as a Vice President at K&S. From 1985 to 1992, he served as the Vice President and General Manager of KLA Instruments in Israel.

Mr. Vilenski is active as a volunteer for numerous educational and industrial activities, including the interactive Museum of Science in Haifa, Young Entrepreneur program and several other entrepreneurship programs for young students. Mr. Vilenski serves on the Board of Governors of the Technion and is a member of the Board of the Israeli National Nanotechnology Initiative.

Since 2006 Mr. Vilenski is also an active chairman of several High-Tech Israeli companies.

Dr. Giora Yaron, Chairman of the Executive Committee, Tel Aviv University



Dr. Giora Yaron holds a BA (summa cum laude) in Physics and Mathematics and a PhD in applied physics from the Hebrew University.

Dr Yaron serves as Chairman of Tel Aviv University (Executive Council), and on the board of Amdocs (DOX). Dr Yaron serves on the advisory board of the Ministry of Defense.

Dr. Yaron is an active Founding Investor and Founder of a group of high-tech and med-tech companies; P-cube, (acquired by Cisco), PentaCom (acquired by Cisco), Qumranet (acquired by Redhat), Comsys (acquired by Conexant, Texas Instruments), Exanet (acquired by Dell) Hyperwise Security (acquired by Checkpoint) Qwilt, Itamar Medical, Excelero, Equalum and, Aqua Security. Dr. Yaron has been serving as board member and/or Chairman of the Boards of these companies since their inception.

Dr. Yaron served as Chairman of the Board of Mercury Interactive (acquired by HP).

From 1992-1995 Dr. Yaron has served as President of Indigo NV, leading the company to an NASDAQ IPO. Prior to joining Indigo served as corporate Vice President of National Semiconductor and was the Founder of National wafer fab in Israel (today Tower-Jazz Semiconductors) [.

In 2008 Dr Yaron presented at the Computer History Museum the revolutionary microprocessor development work he lead with his team at NCS which provides the foundation for the microprocessors as we know them today.

In 2009 Dr Yaron was granted Honorary Fellowships by The Hebrew University.

From 2009-2013 served on Israel Prime Minister Entrepreneurship and Innovation Committee.

Dr. Yaron holds a Ph.D. in Device Physics from the Hebrew University has published numerous scientific papers and holds numerous patents.

OBSERVERS

Prof. Yosi Shacham, The Bernard L. Schwartz chair for nano scale information technologies, Department of Electrical Engineering



Prof. Yosi Shacham-Diamand, The Bernard L. Schwartz chair for nano scale information technologies, Department of Electrical Engineering - Physical electronics and the department of Material science and technology, Faculty of engineering, Tel Aviv University.

D.Sc. EE 1983, M.Sc. EE 1980, and B.Sc. EE (Summa-cum Laude) 1978, all in the Technion-Israel Institute of Technology, Haifa, Israel. 1983-post-doctorate at U.C. Berkeley, CA, USA. 1987- 1989 senior lecturer, the Technion, Israel. 1989-1996 assistant professor Cornell university, Ithaca NY, USA, 1997-2001 Associate professor and since 2001 a full professor at the school of electrical engineering, Physical Electronics department, Tel-Aviv University.

Yosi has been also a Visiting professor, CNR-IMM, Rome, Italy, Visiting Professor, Waseda University, Tokyo, Japan and a distinguished international chair professor, Feng Chia University, Taichung, Taiwan. Currently he is visiting professor at the Department of Electronics and Telecommunication, The Politecnico di Torino, Torino, Italy.

He served in few academic positions including being the Academic Director, Micro Technologies Laboratory, Faculty of Engineering, Tel-Aviv university (2000–2001), the director of Tel-Aviv University research institute for Nano-Science and nano-technologies (2001–2004), Head of the department of Physical Electronics, faculty of Engineering (2007- 2011), the Vice-dean of the faculty of engineering for Industrial relations and with the friends of the faculty in Israel and abroad. He was on the university board of governors (2008-2012), University patent committee (2006-2010), head of the industrial affiliation program, Faculty of engineering (2012) and a Member of the board of directors of "RAMOT" by Tel Aviv University (2008-2013). He is a Member of the MAGNET committee promoting basic and generic technologies in Israel, the innovation authority, Ministry of trade and Industry.

He published 240 journal papers, >400 conference papers in registered proceedings, 7 chapters in books, 30 patents, edited two conference proceedings books, and two books.

His research is in the field of Micro and Nano electronics science and technology; specifically, electroless plating of metals and alloys, interconnect technology for ULSI circuits and flexible electronics, and electrochemical bio sensors the food, medical and agro applications.

Ofer Gol, Business Development Manager at Kidum, Tech Transfer of ARO Agricultural Research Organization, Ministry of Agriculture, State of Israel



Business Development Manager at Kidum, Tech Transfer of ARO Agricultural Research Organization, Ministry of Agriculture, State of Israel. Ofer was formerly CEO at Ligature Ltd. OCR and linguistic Solutions, a world leader in developing, marketing and support of Optical Character Recognition (OCR) technologies and applications.

Previously he served as CEO at BioGuard biometric systems technologies Ltd, a technological company specializing in the planning, research & development, manufacture and marketing of biometric systems and solutions for physical and logical access control, mainly based on fingerprint, face recognition and palm vein recognition technologies. Before leading BioGaurd, Ofer served as CEO of Dialog Interactive Ltd. a technological company developing computerized systems, mainly for the homeland security market.

Ofer holds holds a Bachelor's Degree in Sociology in Tel Aviv University, Israel. In addition, he obtained an MBA in International Business management in Edinburgh Business School.

LIST OF PARTICIPANTS

India

1. **Mr. Jamshyd Godrej**, Chairman of the Board, Godrej and Boyce Manufacturing Company Ltd (Co-Chair)
2. **Mr. Nikhil Sawhney**, Vice Chairman and Managing Director of Triveni Turbine Limited and Director, Triveni Engineering and Industries Limited (Co-chair)
3. **Mr. Chandrajit Banerjee**, Director General, Confederation of Indian Industry
4. **Col. Rajinder Singh Bhatia**, President & CEO, Kalyani Group
5. **Keshav Chandra**, Joint Secretary, FT WANA, Ministry of Commerce and Industry, Government of India
6. **Mr. Sanjay Chhabra**, Partner, Archer & Angel
7. **Mr. Pramit Pal Chaudhuri**, Foreign Editor of Hindustan Times and Distinguished Fellow & Head, Strategic Affairs, Ananta Aspen Centre
8. **Mr. Tarun Das**, Chairman, Institute of Economic Growth
9. **Mr. K R S Jamwal**, Executive Director, Tata Industries
10. **Professor Devang V. Khakhar**, Director, Indian Institute of Technology – Bombay
11. **Ambassador S K Lambah**, Chairman, Ananta Aspen Centre and Former Special Envoy of the Prime Minister of India
12. **Mr. Rohtash Mal**, Chairman and Managing Director, EM3 AgriServices Pvt Ltd
13. **Mr. Sudhir Mehta**, Chairman & Managing Director, Pinnacle Industries
14. **Air Marshal KK Nohwar (Retd)**, Director General, Centre for Air Power Studies
15. **Ms. Kiran Pasricha**, Chief Executive Officer, Ananta Aspen Centre
16. **Professor K. Vijay Raghavan**, Principal Scientific Adviser, Government of India
17. **Mr. Raghuttama Rao**, CEO, Gopalakrishnan Deshpande Center for Innovation and Entrepreneurship, Indian Institute of Technology, Madras
18. **Mr. Pranab Dhal Samanta**, Deputy Executive Editor, The Economic Times

19. **Mr. Salil Singhal**, Chairman of PI Industries Ltd
20. **Mr. N Sivasamban**, Vice-President, Global Corporate Affairs, Tata Sons
21. **Col. Vivek Uberoy**, General Manager (Marketing), Alpha Design Technologies Ltd
22. **Admiral Anil Kumar Verma, VSM (Retd)**, Former Chairman & Managing Director, Garden Reach Shipbuilders & Engineers Ltd

Observers:

1. **Mr. Sujith Haridas**, Executive Director, Ananta Aspen Centre
2. **Ms. Harshit Sehgal**, Senior Director, Ananta Aspen Centre
3. **Mr. Sreekumar Nair**, Senior Director, Confederation of Indian Industry
4. **Mr. Arunabha Bhattacharya**, Programme Officer, Ananta Aspen Centre
5. **Mr. Manish Kumar**, Deputy Director, International, Confederation of Indian Industry

Profiles of Indian Participants

Mr. Jamshyd Godrej, Chairman of the Board, Godrej and Boyce Manufacturing Company Ltd (Co-Chair)



Mr. Jamshyd N. Godrej is the Chairman of the Board of Godrej & Boyce Manufacturing Company Limited. He graduated in Mechanical Engineering from Illinois Institute of Technology, USA.

Mr. Godrej is the former Chairman of Ananta Aspen Centre (previously known as Aspen Institute India), Chairman & Trustee of Ananta Centre. He is the President of World Wide Fund for Nature – India. He is the Chairperson of the Board of Directors of Shakti Sustainable Energy Foundation, India Resources Trust and Council on Energy, Environment and Water. He is a Director of World Resources Institute, USA. He is also a Trustee of the Asia Society, USA. He is the Past President of Confederation of Indian Industry and also the Past President of the Indian Machine Tool Manufacturers' Association.

Mr. Godrej is the Chairman of the CII Sohrabji Godrej Green Business Centre. The Centre is housed in a LEED Platinum demonstration building which is the first green building in India and the greenest building in the world at the time when it was rated. The Green Business Centre is a Centre of Excellence for green buildings, energy efficiency, energy conservation, non-conventional energy sources, water policy, water conservation, etc.

Godrej and Boyce Mfg. Co. Ltd. manufactures and markets refrigerators; washing machines; air conditioners; office furniture; home furniture; security equipment for banks (such as safes, strong room doors, bank lockers, etc.) and for commercial establishments and homes; locks and latches, forklift trucks and warehousing equipment; process equipment for chemical, petrochemical, refineries and allied industries; precision tools for sheet metal, zinc, aluminium; real estate development.

The Godrej group are leaders in home appliances, consumer durables, office equipment, industrial products, consumer products and services.

Mr. Godrej is an ardent yachting enthusiast and has done extensive cruising along the west coast of India, the Baltic & North Sea, the Atlantic Ocean and in the Mediterranean Sea.

The President of India conferred on Mr. Godrej the “Padma Bhushan” on 3rd April 2003.

Mr. Nikhil Sawhney, Vice Chairman and Managing Director of Triveni Turbine Limited and Director, Triveni Engineering and Industries Limited and GE Triveni **(Co-chair)**



Nikhil Sawhney is the Vice Chairman and Managing Director of Triveni Turbine and a Director with Triveni Engineering and Industries and GE Triveni. The Companies occupy leadership positions in their respective businesses of sugar manufacturing, distillation of alcohol, renewable energy generation, industrial turbines and gears, and water and wastewater treatment solutions, spanning 16 manufacturing locations in India.

Triveni Turbine is the preeminent manufacturer of industrial steam turbines in India, as well as the second largest manufacturer globally. The company has an installed base of over 3,500 installations in over 75 countries. The customer base includes defense, process industries, and thermal and renewable energy producers. Triveni Turbine also has a majority in an exclusive global joint venture with General Electric for steam turbines between 30 and 100MW.

The Group's newer businesses include marine propulsion, civil aero-engine MRO and supercritical CO₂ based energy systems.

Nikhil had been voted one of India's forty 'hottest' business leaders under 40 by The Economic Times in 2015, and has also been awarded the Udyog Ratna by the Institute of Economic Studies. Nikhil has helped found the CII-Triveni Water Institute and is an active trustee of the Tirath Ram Shah Charitable Hospital and the Emmanuel College India Trust, as well as a Fellow of the Ananta Aspen Center and the Aspen Global Leadership Network. Nikhil is also the Treasurer of the All India Management Association (AIMA) and a member of the Board of Governors of IIM Calcutta. Nikhil is a part of the India-UK and India-Israel CEO Forums constituted by the Government of India. Nikhil is also Co-Chair of the CII National Committee on Capital Goods and Engineering as well as the Chairman of Delhi State CII.

Mr. Chandrajit Banerjee, Director General, Confederation of Indian Industry



Chandrajit Banerjee is the Director General of the Confederation of Indian Industry (CII). He has been with CII for about 3 decades and has been the Director General, CII since May 2008.

Mr Banerjee is a Post-Graduate (MS) in Economics with specialisation on Economics of Planning and Econometrics from the University of Calcutta. Earlier, he did his Graduation from St. Xavier's College (Calcutta) in Economics (Hons).

As Director General, he is responsible for the overall operations of CII.

Prior to his appointment as Director General, he held several senior positions in CII. He was also in Bangalore to initiate the Centre of Excellence of the Indian Machine Tool Manufacturers' Association.

He has been responsible for important areas of work. He has led key policy work of CII in the areas of Economic Policy, Financial Services and Corporate Governance (he was also the First Executive Director of the National Foundation of Corporate Governance -NFCG, an organization set up by the Ministry of Company Affairs, Government of India). He continues to be in the Board of Trustees and Governing Council of NFCG as a Member.

He is an advisory Board Member of the Commonwealth Enterprise and Investment Council (CWEIC) and Member of Board of the Global Innovation and Technology Alliance (GITA). Mr Banerjee is a Director in the Singapore India Partnership Foundation (SIPF) and a Director at the Invest India.

Mr Banerjee has been honored with the China-India Friendship Award by the Chinese Premier Wen Jiabao for his contributions towards the development of bilateral ties between India and China. He has also been conferred with the decoration of Knight Commander of the Order of Queen Isabella by His Majesty the King of Spain in recognition of his most meritorious achievements and exceptional contributions towards promoting relations between India and Spain.

Mr Banerjee is also the Secretariat for several bilateral CEOs Forums constituted by the Government of India.

With 65 offices, including 9 Centres of Excellence, in India, and 11 overseas offices, as well as institutional partnerships with 355 counterpart organizations in 126 countries, CII serves as a reference point for Indian industry and the international business community.

Col. Rajinder Singh Bhatia, President & CEO, Kalyani Group



He has pursued B.E (Hons) in Civil Engineering and subsequently earned his Post-Graduation, specializing in Structures. He is a Fellow of Institute of Engineers. He has done his Master Diploma in Management from Symbiosis and Masters in Management Studies from Osmania University. He has served instructor and directing staff in number of prestigious establishments and institutions. He has also served as Defence Adviser at Mauritius.

Rajinder Singh Bhatia is currently employed with USD 3 Billion Kalyani Group, a leading Engineering Conglomerate headquartered in Pune, Maharashtra as President & CEO, Defence and Aerospace. Under him, Kalyani Group has forged partnerships and collaborated with major Defence and Aerospace OEMs of the world including Elbit Advanced Systems and Rafael Advanced Systems of Israel. In Defence Vertical, there are five sister companies of Kalyani Group catering to various Defence domains. He is a senior member of CII National Defense Committee and FICCI National Committee on Defence. He is currently Chairman of CII WR Sub Committee of Defence and Chairman of the CII Sub Committee on Land Systems.

In his previous company, he headed the Land Systems and International Business for nearly seven years before joining Kalyani Group. He was instrumental in setting up and operating a Green field plant for manufacture of defense equipment in a record time equipped with world class facilities. He was also member of the group strategy team and worked closely with BCG for two years for developing business strategy for the Group.

He is Chairman of Board of Analogic Control Systems, KRAS (A joint venture between Rafael and KSSL), BFPPEL and Kalyani Strategic Systems Limited. He is also Executive Director on the Board of BF ELBIT Advanced Systems.

In past he was member of Kelkar committee and is currently Chairman of Sub Group for Macro Process & Management for selection of Strategic Partners.

Keshav Chandra, Joint Secretary, FT WANA, Ministry of Commerce and Industry, Government of India



Profession
Indian Administrative Service

Papers & Books

Key Data

Lecture – Paper

Current Position

Joint Secretary, Ministry of
Commerce & Industry,
Government of India

Professional History

(i) Chief Executive Officer, Delhi Jal
Board and Secretary Environment,
Government of NCT of Delhi

(ii) Chairman & Managing Director,
Delhi Tourism & Transportation
Dev. Corp Ltd. (Sep-15 to Nov-16)

(iii) Secretary (Power & Education)
Goa (May-12 to Aug-13)

(iv) Secretary (Environment),
Delhi-2012)

(v) Secretary to Chief Minister (Jul-
07 to May-12)

(vi) Secretary, New Delhi
Municipal Council (Jul-05 to Jul-07)

(vii) Commissioner (Excise), Delhi

Qualifications:

(i) M. Sc-Public Governance & Mgt.
from London School of Economics

(ii) M.A. Economics

Professional Association

(i) Director, GSDL Board

(ii) Member, Delhi Urban Shelter
Improvement Board

(iii) Director, Shahjahanabad
Redevelopment

1. “India should stop
gushing”- article on
water supply in
Economic Times, Delhi,
2016

2. “Cleaning Delhi Air”-
Policy Paper, LSE
Journal

3. “Water: The last
frontier of Capitalism”,
The Financial Express

4. Special Invitee for
Vatican World Water
Summit, Feb 2017

5. Lecture in “Water
conference”
Barcelona:2016
Status of water supply
in India

6. Lecture in River
Rejuvenation: Paris,
2016

7. Speaker at the
Global Summit on
Smart Secure and
Sustainable Cities,
2016 UK

Keshav Chandra joined the prestigious Indian Administrative Service in the year 1995 and is working as Joint Secretary in the Department of Commerce, Government of India. In the present Capacity he is developing a National Trade Platform to enable and facilitate all domestic and EXIM trade through a single portal. Having worked in various capacities in several states of India, he has gathered vast experience in the field public policy and public management. As CEO, DJB he managed one of the largest water utilities in the world. In Delhi, he was Secretary (Environment) and represented India in the C-40 Environmental Summit at Rio in 2011. He was secretary to the Chief Minister, Delhi for five years in which he participated in the policymaking at the highest level in the state. As Secretary, New Delhi Municipal Council, he initiated many PPP projects in solid waste management sector. As Commissioner, Excise, Delhi, he has streamlined the excise collection process and launched IT enabled service in this area. He has vast experience ranging from the social sector such as education, art and culture to infrastructure sectors like Power, Water. He has also formulated a plan to improve the water distribution system in Delhi Jal Board, the largest water utility of India by innovatively dovetailing the expertise of private and public sectors.

Mr. Sanjay Chhabra, Partner, Archer & Angel



Sanjay is the founding partner of the law firm of Archer & Angel and primarily based in the firm's New Delhi office. He is the head of the firm's Corporate and Intellectual Property practice and has over 20 years of experience. Sanjay has been assisting clients which includes world's leading Multinationals in FMCG, Electronics, Information Technology, Real Estate, Hotel and Restaurant Chains, Food and Beverages, Technology etc.

Sanjay has extensive experience in advising both domestic and foreign corporations on corporate issues, ranging from foreign investment and exchange control regulations applicable in India including regulatory approvals, structuring foreign investments into India and domestic investments overseas, incorporation of companies, joint ventures, mergers and acquisitions including extensive due diligence on target companies, corporate governance and director's liabilities, corporate compliance issues and preparation and advise on transaction documents.

He also advises on a wide variety of legal issues affecting intellectual property, including drafting and negotiating agreements for protection of trademarks, brand names, domain names, copyright and designs, management of portfolios and enforcement mechanisms. In addition, Sanjay has extensive experience is advising corporations on legal and regulatory issues, ranging from foreign investment regulations, industry specific approvals, regulatory matters affecting trade and business.

Sanjay is also on the Board of a number of companies offering expertise to companies on a variety of issues in such capacity.

Sanjay obtained a Bachelor of Laws (L.L.B) and Bachelor of Arts (majoring in Political Science, Hindu College) from University of Delhi in India and has previously worked with a leading law firm in Boston, United States.

Professionally, he acts as counsel and sits on committees for various non-profit organizations working to better economy, sports and culture in India including India Youth Soccer Association. He also is a member of International Trademark Association (INTA), International Franchise Lawyers Association (IFLA), Inter Pacific Bar Association (IPBA), American Bar Association (ABA), Asian Patent Attorneys Association (APAA) and Bar Council of India.

Mr. Pramit Pal Chaudhuri, Foreign Editor, Hindustan Times and Distinguished Fellow & Head Strategic Affairs, Ananta Aspen Centre



Pramit Pal Chaudhuri writes on political, security, and economic issues. He previously wrote for the Statesman and the Telegraph in Calcutta. He served on the National Security Advisory Board of the Indian government from 2011-2015. Among other affiliations, he is a member of the Asia Society Global Council, the Aspen Institute Italia, the International Institute of Strategic Studies, and the Mont Pelerin Society. Prमित is also a senior associate of Rhodium Group, New York City, advisor to the Bower Group Asia in India, a member of the Council on Emerging Markets, Washington, DC, and a delegate for the Confederation of Indian Industry-Aspen Strategy Group Indo-U.S. Strategic Dialogue and the Ananta Aspen Strategic Dialogues with Japan, China and Israel. Born in 1964, he has visited over fifty countries on five continents. Mr. Pal Chaudhuri is a history graduate from Cornell University.

Mr. Tarun Das, Chairman, Institute of Economic Growth



Tarun Das is currently the Chairman of Sasakawa India Leprosy Foundation (S-ILF); Institute of Economic Growth (IEG) and also Chairman, Advisory Board, JCB India.

He is deeply involved with various non-profit institutions such as Ananta Aspen Centre (AAC); Ananta Centre (AC); The Aspen Institute, USA; Council on Energy Environment and Water (CEEW); Singapore India Partnership Foundation (SIPF); Indian Council for Research on International Economic Relations (ICRIER); Bharatiya Yuva Shakti Trust (BYST); CII-Triveni Water Institute; World Wildlife Fund (WWF).

He has been working closely on deepening international ties. He is Co-Chair, US – India Strategic Dialogue, India- Japan Strategic Dialogue, US-India -Japan Strategic Dialogue and Member, India-Singapore Strategic Dialogue, India-China Strategic Dialogue, India-Israel Forum, India- Turkey Forum, India-Korea Strategic Dialogue, US - India Climate Change Dialogue and Trilateral Commission.

He is also Member, International Advisory Board, Chubb (USA).

Formerly, he was the Director General of Confederation of Indian Industry (CII) from April 1967 to May 2004 and from June 2004 to Oct 2009 he was the Chief Mentor of CII.

He has authored a book: “Crossing Frontiers.”

He has received Padma Bhushan for contribution in the field of Trade and Industry, by the President of India; Singapore National Award (Public Service Medal) by the Singapore Government for contribution to strengthening economic ties between India and Singapore; Honorary Doctorate in Science, The University of Warwick, UK; Honorary CBE for contribution to Indo-British relations; Honorary Doctorate by the Tel Aviv University, Israel for extraordinary commitment to promoting the Indian Economy in the global arena; Sweden Royal Order of the Polar Star for contribution in strengthening Indo- Swedish relations; Order of the Rising Sun, Gold Rays with Neck Ribbon by Japan Government for contribution in strengthening India- Japan relations.

Mr. K R S Jamwal, Executive Director, Tata Industries



KRS Jamwal, as executive director of Tata Industries, is responsible for the incubation of new ventures as well as investments made by Tata Industries in new businesses.

Mr Jamwal is also on the board of Tata companies such as Tata Advanced Materials, a leader in aerospace composite manufacturing; Tata UniStore, which owns Tata CLiQ, a one-of-a-kind, leading omni-channel marketplace; Tata SmartFoodz, a food innovations company engaged in the manufacture and marketing of delicious ready foods (where he serves as director and chairman of the board); and Inzpera Healthsciences, a health sciences company that markets palatable and efficacious therapeutic products (where he serves as director and chairman of the board). He is also a member on the board of the overseas subsidiary of Tata Industries — Qubit Investments PTE (Singapore). He represents Qubit on the boards of: Flisom AG, which manufactures flexible, lightweight solar modules at market-comparable efficiency and costs; i3 Equity Partners, a Tel Aviv based technology incubator in IoT (Internet of Things) and industrial IoT; and SDX Partners LLC, USA, which provides seed funding to student-initiated business ideas at the Massachusetts Institute of Technology, Boston.

Prior to joining Tata Industries, he served as vice president, strategy, group corporate centre, Tata Sons, assisting the then Group Chairman, Ratan Tata, on strategy-related matters concerning Tata companies and supporting him on special assignments such as the Investment Commission (2005-2009) and the US-India and UK-India CEO Forums.

Mr Jamwal started his career with TAS (formerly known as Tata Administrative Services) in 1989. His initial assignments included project management for setting up new hotels and flight catering units, with subsequent responsibilities relating to strategic planning and mergers and acquisitions for the Taj Group of hotels. He has a bachelor's degree in technology in petroleum engineering from the Indian School of Mines, Dhanbad, and was awarded the scholastic gold medal and the best student shield. His post-graduation is in management from the Indian Institute of Management, Ahmedabad, where he was awarded the scholastic gold medal and the KV Srinivas Award for the best all-rounder.

Professor Devang V. Khakhar, Director, Indian Institute of Technology Bombay



Professor Devang Khakhar is currently Director of IIT Bombay and Professor of Chemical Engineering.

Professor Khakhar did his B.Tech. from IIT Delhi in 1981 and his Ph.D. from the University of Massachusetts, Amherst in 1986. He joined the Department of Chemical Engineering at IIT Bombay in January 1987, and has been with the Institute since then.

Prof. Khakhar's research interests include mechanics of granular materials and polymer processing. He has published over 100 papers in these areas. For his research achievements, Prof. Khakhar has been accorded several prestigious awards, which include the Shanti Swarup Bhatnagar Prize (1997) and the Swarnajayanti Fellowship (1998). Prof. Khakhar is also a recipient of IIT Bombay's "Excellence in Teaching Award" and the "Mathur Award for Research Excellence". He has recently received the prestigious D.M. Trivedi Lifetime Achievement Award from the Indian Chemical Council. He is a Fellow of the Indian National Academy of Engineering, the Indian National Science Academy, the Indian Academy of Sciences and the National Academy of Sciences, India.

Prof. Khakhar served on the Science Advisory Council to the Prime Minister of India (SAC-PM) and Scientific Advisory Committee of the Cabinet (SAC-C). He serves/served on several national and international Committees and Boards including the Central Advisory Board of Education (CABE), Atomic Energy Regulatory Board (AERB), DRDO Science & Technology Management Council (DSTMC), Antrix Corporation of ISRO, Indian Oil Corporation Ltd., International Academic Advisory Panel of Government of Singapore, to mention a few. He is the Executive Editor of the journal "Advanced Powder Technology".

Prof. Khakhar has served as Professor-in-Charge of IIT Bombay's Continuing Education Program from 2001-02, as Head of the Department of Chemical Engineering from 2002-04, and the Dean of Faculty Affairs from 2005-08. He has been the Director of IIT Bombay since January 2009.

Ambassador S K Lambah, Chairman, Ananta Aspen Centre & Former Special Envoy of the Prime Minister of India



Satinder K Lambah was the Special Envoy of the Prime Minister of India from 2005-14 with the rank of Minister of State from 2010 onwards. He was also the Co-Chairman of the Task Force on National Security 2011 – 2012. He was the President of Association of Indian Diplomats in 2005. He was Convener of the National Security Advisory Board (NSAB) in 2004-05 and the President of the Federation of Indo-German Societies in India from 2005-2014. He was also the Special Envoy of the Government of India for Afghanistan and led the Indian delegation to the Bonn Conference on Afghanistan in 2001-02. In 2001, He Chaired a Committee on the Re-organization of Ministry of External Affairs and Indian missions abroad. He has served in several Missions abroad including as the Ambassador of India to the Russian Federation, Ambassador of India to the Federal Republic of Germany, High Commissioner of India to Pakistan, Consul General of India, San Francisco, and Ambassador of India to Hungary. He was Deputy Secretary General of the 7th Non Aligned Summit held in Delhi in 1983 and later Coordinator of the Commonwealth Heads of Governments meeting in India. His specializations include Economic Diplomacy and dealing with India's neighbours. During his tenure as Consul General of India in San Francisco (1989-91) he was conferred a "Trustees' Citation" by the University of California, Berkeley in 1991 for his initiating, coordinating, and spearheading the

campaign which generated over US\$2 million in a short span of four months for Indian Studies, resulting in the creation of two Chairs of India Studies, a bi-annual lecture by a distinguished scholar from India, and an annual scholarship at the Graduate School of Journalism at U.C Berkeley. He is married to Nilima Lambah, author of “A Life across Three Continents - Recollections of a Diplomat’s Wife”.

Mr. Rohtash Mal, Chairman and Managing Director, EM3 AgriServices Pvt Ltd



Highlights:

- 40+ years in large Indian Corporates
- Multiple Industries: A-gri -Machinery, Agriculture, Telecom, Automobiles, Paper, Chemicals, Switchgear
- Different business stages: Executing greenfield projects, managing steady growth businesses, and delivering turnarounds
- Organization Building: Four startups and two turnarounds
- Varied shareholding structures: Foreign JVs, Publicly listed, State owned, Private family owned
- Strong relationships in Industry and Government
- IIT (1976) and IIM (1979)

Current

- Chairman & MD, EM3 AGRISERVICES PVT LTD. Founder of a large scale start up in the Agri Tech and Agri Services space.
- CMD, EQUITIGRO. Turnaround Management Consulting.
- Member of the Executive Advisory Committee of Simon Business School, University of Rochester
- Member of the Confederation of Indian Industries, (CII) Agricouncil
- Member of the Confederation of Indian Industries (CII) National Committee on Technology
- Charter Member, Indian Angel Network & TiE (The Indus Entrepreneurs)
- Member, Agri Council of FICCI

Past

- Executive Director & CEO, Escorts Limited (Agri Machinery Group)
- Chief Executive Officer, Bharti Airtel Ltd: ▪ Chief Executive Officer, Bharti FieldFresh Limited / Bharti Delmonte Foods ▪ Chief General Manager Sales and Marketing, Maruti Suzuki Ltd.
- Senior Vice President, Ballarpur Industries Ltd.
- Director / Representative of Khosla Ventures, USA in Indian Start-ups
- President of Tractor Manufacturers Association of the CII

Mr. Sudhir Mehta, Chairman & Managing Director, Pinnacle Industries Ltd



Mr. Mehta is Chairman & Managing Director of Pinnacle Industries Ltd, Pithampur, Madhya Pradesh. Pinnacle is India's largest commercial vehicle seating and Interiors Company. He holds a Bachelor's Degree in Computer Science & Economics - Depauw University, USA and MBA in Finance & International Business - University of Chicago, USA.

Mr. Sudhir Mehta is a serial entrepreneur who has started and successfully led several ventures. The group employs over 3000 people in India, Israel, Spain and USA. He is also the Past Chairman of CII Western Region.

He was conferred "The Super Entrepreneur of the Year" award in 2018 by Machinist Magazine (Times Group Publication) for his contribution to the Indian manufacturing sector.

Mr. Mehta is also:

- Director, Force Motors Ltd, Pune - Force is a leading automobile company, with expertise in design, development and manufacture of the full spectrum of automotive components, aggregates and vehicles for the last 60 years. Its range includes Small Commercial Vehicles, Multi-Utility Vehicles (MUV), Light Commercial Vehicles (LCV), Sports Utility Vehicles (SUV) and Agricultural Tractors.
- Director, Rivulis Irrigation Ltd. Israel - Rivulis is one of the leading drip and micro irrigation manufacturers worldwide. With 11 factories in 20 countries, it has a global distribution network of over 1,000 dealers and OEM partners. The company has its India factory in Gujarat.
- Director, Kider India Pvt. Ltd, Pune - Kider is India's largest manufacturer of store fittings.
- Vice Chairman, Indaux India, Pune - Indaux is a joint venture with Indaux Spain for furniture fittings.
- Director, VDL Pinnacle Engineering, Pune - Is a joint venture company with VDL Groep of Netherlands to provide specialised engineering services for the production automation Industry worldwide.
- Director, CB VAT Israel, India. Reclaiming International VAT.
- Managing Director of Man Force Trucks from 2004 to 2011. Successfully set up a medium and heavy truck plant in collaboration with MAN Germany with a capacity of 24,000 trucks annually. Setup a nationwide network of Sales & Service dealers in India with exports to over 20 countries.

Mr. Mehta is on the Board of Management of Ajeenkya D Y Patil University and Member of Indian Angels Network which is India's largest network of angel investors. He is also been on the South Asia Board of the Young Presidents Organisation (YPO) Advisory Council of IIT Gandhinagar Research Park & Innovation and Entrepreneurship Centre.

He is also involved in social activities in his capacity as:

Secretary, (BMVSS), Indore Largest Artificial Limbs NGO in the world. Rehabilitated more than 1.3 million amputees and polio patients by fitting / providing artificial limbs (Jaipur Foot variations), calipers, and other aids and appliances free of cost, in 26 countries across the world.

Partner - Global Research Innovation & Technology-NGO (GRIT) - Boston - USA / India – NGO making the Leveraged Freedom Chair (LFC) - Joint activity between Massachusetts Institute of Technology (MIT) & Pinnacle. Enables people with disabilities in developing countries to get access to mobility.

Director, Pune City Connect Development Foundation

Director, Science and Technology Park, University of Pune

Director, Association of Certified Valuators and Analysts India (ACVA).

Co Chairman, CII National Committee on Intellectual Property.

Air Marshal KK Nohwar (Retd), Director General, Centre for Air Power Studies



Born at Ambala on 07 May 1952 into an Army family, he did his schooling at Barnes School, Devlali. He is an alumnus of the National Defence Academy and was commissioned into the Fighter stream of the Indian Air Force on 24 Jun 1972. He has 3400 hours of flying to his credit. During his initial tenures at fighter squadrons, he flew the MiG-21 and later commanded a MiG-27 Squadron. A Qualified Flying Instructor and a Fighter Combat Leader, he is a graduate of DSSC, Wellington and Air War College (USA). His command appointments include CO of 9 Squadron, Commandant Tactics and Air Combat Development Establishment (TACDE), AOC 16 Wing, AF and AOC-in-C, Eastern Air Command. His important staff assignments include Chief Operations Officer (COO) 33 Wing, Dy Comdt College of Air Warfare (CAW), Principal Director Air Staff Inspection (PDASI), and ACAS (Plans). He has also served as Chief of Staff at Andaman & Nicobar Command, Deputy Commander-in-Chief of Strategic Forces Command (both tri-Service appointments), and Senior Air Staff Officer (SASO), Training Command. He retired as the Vice Chief of the Air Staff in May 2012. Air Marshal KK Nohwar was awarded the Vayu Sena Medal in 1998 and the Param Vishisht Seva Medal on 26 Jan 2011. He joined the Centre for Air Power Studies (CAPS) as Additional Director General on 01 Oct 2014. He took over as the Director General, CAPS on 02 May 2018.

Ms. Kiran Pasricha, Chief Executive Officer, Ananta Aspen Centre and Ananta Centre



Kiran Pasricha is the Chief Executive Officer of Ananta Aspen Centre & Ananta Centre but she does not hold that as her defining identity. Kiran counts herself among those who are committed to building an inclusive society powered by dialogue and leadership. Her career path is a reflection of her beliefs.

Kiran moved to the not for profit side of business, joining the Confederation of Indian Industry after a stint in the private sector. In 1995, she was charged with setting up CII's office in the US. This, at a time when the world was not yet interested in India's economic potential. As Head of CII USA, she was instrumental in initiating key programs such as the US-India Strategic Dialogue, CII's Congressional Program, and the India Business Forum (IBF). These initiatives continue to help improve political and economic ties between the two countries. Today, the CII Office in the US has evolved into a strategic resource centre for US bodies that want to engage with India.

Kiran moved back to India in 2011 and today heads Ananta Aspen Centre and Ananta Centre. These Centres focus on leadership development and encourage frank and open dialogue on the most important issues facing Indian society, to help foster its transformation. They also engage civil society, business, governments and other key stakeholders on issues of importance to India's development, foreign policy, strategic affairs and national security. The Centres work on Track II dialogues with countries including the US, Israel, Singapore, Japan, China and Korea. As part of education and values based Leadership Development, the Centres offer a number of programs, targeting both children and adults.

Professor K. Vijay Raghavan, Principal Scientific Adviser, Government of India



Professor K. Vijay Raghavan is the Principal Scientific Adviser to the Government of India, succeeding Dr. R. Chidambaram on April 3, 2018 and the Chairperson of Prime Minister's Science, Technology & Innovation Advisory Council (PM-STIAC). He was Secretary, Department of Biotechnology (DBT), Government of India from January 28, 2013 to February 2, 2018.

The Principal Scientific Adviser works with all arms of the Government, with our States, our citizens, national and international agencies. The goal is that the benefits of science, technology and innovation solutions reach the most needy, for the sustainable development of India and for the well being of our planet.

Vijay Raghavan is also a Distinguished Professor at the National Centre of Biological Sciences (NCBS), Tata Institute of Fundamental Research Bangalore (TIFR) and was the NCBS Director till 2013. He studied Chemical Engineering at the Indian Institute of Technology, Kanpur, holds a Ph.D. in Molecular Biology from the Tata Institute of Fundamental Research was a Senior Research Fellow at the California Institute of Technology. His research is on nerves and muscles and how complex behaviour emerges during animal development.

Vijay Raghavan is a Fellow of the Indian Science Academies, the Royal Society, the Academy of Medical Sciences (UK) and a Foreign Associate of the US National Academy of Sciences. He was awarded the Padma Shri by the Government of India in 2013.

Mr. Raghuttama Rao, CEO, Gopalakrishnan Deshpande Center for Innovation and Entrepreneurship, Indian Institute of Technology, Madras



Raghu (Raghuttama Rao) is the CEO of the Gopalakrishnan-Deshpande Center for Innovation & Entrepreneurship (GDC) at IIT Madras. Prior to GDC, Raghu was MD & CEO of IMAcS, a management consulting business which he founded as a subsidiary of ICRA (now a Moody's company in India), with an operating footprint in over 20 countries. He graduated from IIT Madras and IIM Ahmedabad. Raghu was a Fulbright scholar at Carnegie Mellon University, Pittsburgh. He is also a qualified Management Accountant. Raghu's experience of over 30 years has been in Engineering, Financial markets, and Public Policy. GDC is an alumni-funded initiative to strengthen the processes of innovation & entrepreneurship at IIT Madras and in the wider ecosystem across India. GDC focuses on the pre-incubation space and seeks to convert tech-based ideas of faculty / research scholars into well-curated start-ups that either get taken up by incubators or funded by angel investors. More details of GDC at <http://www.gdc-iitm.org/>

Mr. Pranab Dhal Samanta, Deputy Executive Editor, The Economic Times



Professional Experience:

March 2018 onwards: Deputy Executive Editor, The Economic Times

July 2017-March 2018: Editor of Digital Media start-up ThePrint.in

April 2015-July 2017: National Affairs Editor, The Economic Times

July 2014-April 2015: Executive Editor, India Today, responsible for helping conceive and bringing out the weekly issue, especially by way of credible news content.

June 2013-June 2014: Editor, Express News Service, The Indian Express, coordinating national news coverage besides writing on foreign affairs, security issues, terror investigations and overall governance and national politics

April 2006-June 2013: Chief of Bureau (Deputy Editor), The Indian Express.

April 2005-April 2006: Special Correspondent covering foreign and security affairs, The Indian Express

February 2003-April 2005: Employed as Principal Correspondent, The Indian Express, covering the civil aviation sector besides reporting on foreign policy issues.

Aug. 1999 to January 2003: Employed as Staff Reporter in The Hindu, reporting on local issues in Delhi.

June 1999 to Aug. 1999: Reporter with SUNDAY, a weekly English magazine.

April 1999 to June 1999: Internship with The Statesman.

Conceived and prepared a radio newsreel on Ethnic Strife in Kokrajhar (Assam, North Eastern India) for the All India Radio. The programme was broadcast on 25 March 1999.

Freelance writing for The Pioneer.

Academic Qualifications:

MSc. Econ. in Security Studies, Department of International Politics, University of Wales, Aberystwyth, UK. (Sep. 2000 to Oct. 2001).

Post Graduate Diploma in Journalism (English), Indian Institute of Mass Communication, New Delhi, India (Aug. 1998 to Apr. 1999).

B.A. (History), Loyola College, Chennai, India (May 1993 to June 1996).

Awards:

2010: Ramnath Goenka excellence in journalism award for political reporting

1996: Devasena Gnanapragasam medal for the Most Outstanding Student, Loyola College.

1996: Rukmini Ammal Medal for standing first in History, Loyola College.

1995: Special Award for Excellence and All-round Achievement, Loyola College.

1994: Jerome D' Souza medal for public speaking, Loyola College.

Area of Interest:

To report on national politics, matters of international and national security, foreign policy and diplomacy.

Mr. Salil Singhal, Chairman of PI Industries Ltd



Salil Singhal has been associated with Industry since 1965.

His business interests are in the fields of agrochemicals, fine chemicals, electronic metering services and solutions, mining and mineral processing. The Group employs 8000 people and does business in 50 countries.

P.I. Industries Ltd., with headquarters at Udaipur (Rajasthan) is in the business of agrochemicals and Solutions and Fine Chemicals (Contract Research & Manufacturing Services (CRAMS)). PI produces and sells agrochemicals and speciality micro nutrients through its strong pan India distribution network. It is also engaged in custom synthesis and custom manufacturing of agrochemicals and intermediates, pharma intermediates, specialty chemicals & fine chemicals for MNC customers.

Wolkem India Ltd is the world's largest producer of mineral Wollastonite and India's leading producer of calcium carbonate having its mining and production facilities in 6 Indian States. Wolkem also provides environment, water, waste management and mining consultancy services. It has received many awards and recognition for best mining practices, environmental management and particularly Vraksha Vardhak award from Government of Rajasthan.

Secure Meters Ltd. was started in 1987. The company pioneered electronic metering for the power industry in India, and is now internationally recognized for its innovations with subsidiaries in the UK, Sweden and Australia. It operates through 7 global locations.

Mr. Singhal brings a strong marketing and business development focus to the businesses, making them not only international in outlook but also strong in research and development. Each company in the Group is known to be in the forefront of technology. The Group enjoys an excellent reputation for its high standards of business ethics, and for fair and transparent business practices.

The Group presently employs over 8000 people including 800 people in the area of research/development and innovation. The Group has factories in many parts of India.

Mr. Singhal was Chairman of the Pesticides Association of India, now called the Crop Care Federation of India, for 20 years. Members subsequently elected him as Chairman Emeritus for life.

Mr. Singhal was the Chairman of the Confederation of Indian Industry (CII) Northern Region which comprise of 9 north Indian states with over 2200 members, for the year 2008-09. Then he headed CII's National Council for MSMEs for one year. Presently he is Chairman of CII National Council on

Agriculture. He has been a member of CII's National Council since 10 years. He is also an active member of CII's National Innovation Council, and the Task Force on Corporate Governance and Ethics.

Mr. Singhal is a recipient of the following awards:

- Entrepreneur of the Year – Life Sciences and Agrochemicals for 2014 by Ernst & Young
- Recognized as the Best CEO for 2014 & 2015 in the Mid Sized Chemical Industry segment by the leading magazine Business Today
- Power Brands awarded Mr. Salil Singhal “Global Corporate Leader of the Year” in Dec 2011 in London
- Agriculture Leadership Award 2014 for Life Time Achievements at 7th International Agriculture Summit 2014 in New Delhi
- “Leadership for Business Transformation” Award given by KPMG at the Horasis Conference in Malaga Spain.

He is also an Independent Director on the Boards of Usha Martin Ltd, Somany Ceramics Ltd, Mahindra World City, Lake Palace Hotels & Motels Ltd and Chairman of Secure Meters Ltd and Wolkem India Ltd.

Mr Singhal has addressed many conferences and seminars on the subjects of Indian agriculture, environment, national policies, chemical industry etc. He is also associated with various social, cultural and educational organizations.

Mr. N Sivasamban, Vice-President, Global Corporate Affairs, Tata Sons



N Sivasamban (Siva) is the Vice President, Global Corporate Affairs at Tata Sons Limited, from June 2018. In this role, Siva is responsible for the Group's Strategy development. Siva has been with Tata's since July 2000. Prior to this role, Siva was the Global Head of the Telecom Business Unit of Tata Consultancy Services Limited (TCS). As part of the leadership team of TCS and in this capacity as business unit head, Siva was responsible for Strategy development and deployment, Sales, Delivery, Alliances and Analyst relations. Siva has been an active member of Industry associations such as GSMA, CMAI & TMForum. Siva, a Post Graduate has close to 30 years of experience in the IT, ITeS and Telecom Industries.

Col. Vivek Uberoy, General Manager (Marketing), Alpha Design Technologies Ltd



Col Vivek Uberoy, is a graduate of the National Defence Academy, Khadakwasla and has been conferred B Tech (Electronics) as well as M Tech (Electronics) from Jawaharlal Nehru University, Delhi and also M Tech (Communication & Radar) from IIT, Delhi.

In the Indian Army, he has held various Instructional, Staff and Command Appointments and has mainly been associated with the Technological and Maintenance domains. He has extensive experience in setting up of Maintenance Centres, Overhaul facilities and Engineering Support Packages with a focus on High Technology Low Population Equipment.

Consequently, he has joined M/s Alpha Design Technologies Pvt Ltd, Bangalore and is handling Business Development activities in his role as General Manager (Marketing & Projects) apart from taking care of specific projects in the fields of Electro-Optics, Radar, Control Systems and UAVs.

His role also includes coordination of the activities of Alpha-Elsec Defence and Aerospace Pvt Ltd, which is the Joint Venture Company of Alpha Design Technologies Pvt Ltd and Elbit Systems, Israel, in the capacity of CEO.

Admiral Anil Kumar Verma, VSM (Retd), Former Chairman & Managing Director, Garden Reach Shipbuilders & Engineers Ltd



A triple engineer in Mechanical, Marine and Aeronautical engineering, Rear Admiral AK Verma, VSM (Retd.) joined the Indian Navy on 28 Jan 1978. He holds the unique distinction of being the only technical officer in the Navy to have Commanded both the Ship Repair as well as Aircraft Repair Yards. He was awarded the "Vishist Seva Medal" by the President of India for his distinguished service in the Indian Navy.

After serving in the Indian Navy for 34 years, Adm Verma was appointed as Chairman & Managing Director of Garden Reach Shipbuilders & Engineers Limited, Kolkata on 01 Nov 2011. On taking over as CMD, GRSE, he embarked upon an ambitious task to transform GRSE into a truly world class shipyard. Under his leadership, the shipyard underwent complete transformation in its Infrastructure, Vendor base as well as Work culture.

During his tenure, the shipyard handled a record number of 33 ships involving 07 different projects. This included the State of the Art Anti-Submarine Warfare Corvette "INS Kamorta" & "INS Kadmat" to the Indian Navy and the first ever Export Warship of India, Mauritius Offshore Patrol Vessel "CGS

Barracuda”, which was commissioned at Port Louis, Mauritius in 2015 in the august presence of the Hon’ble Prime Minister of India Shri Narendra Modi and Rt Hon’ble Prime Minister of Mauritius Sir Anerood Jagnauth.

Launch of 18 warships and delivery of 15 ships during his tenure is a testimony of Adm Verma's relentless efforts to take the Shipyard to greater heights. The turnover of the company also doubled in his five years. The Ministry of Defence also recognised Adm Verma's efforts in the Shipyard by awarding “Best Performing Defence Shipyard” trophy to GRSE for four consecutive years.

As CMD, GRSE, Adm Vema also took active part in development of a strong vendor base in the country for Defence Production & the Confederation of Indian Industries (CII) recognised his efforts by electing him Chairman of Eastern Region during the year 2015-16. He has also been the Co-chair of CII National Defence Council. Adm Verma was also the President of the Indian Ship Builders Association in 2016.

On completion of a highly successful tenure of 39 years (34 years in Indian Navy & 05 years in GRSE), Adm Verma superannuated on 31 Dec 2016. Post his retirement, Adm Verma is actively providing leadership & direction to the Defence industries in the country. He also delivers motivational lectures in various institutions including Engineering Colleges & Management Schools.

India and Israel: Towards a Deepening Trade and Economic Partnership

A note for the Eleventh India Israel Forum

New Delhi 5 & 6 December 2018

Introduction

India and Israel established formal diplomatic relations fairly recently – in 1992 and in 2018, the two countries celebrated 25 years of this friendship. Prime Minister Narendra Modi visited Israel in July 2017 – this was the first ever visit to Israel by an Indian head of state since India's independence over 70 years ago. Following close on the heels of that historic visit, Israeli Prime Minister, Benjamin Netanyahu visited India in January 2018¹, signaling the closeness of the relationship and how far it has come in such a short space of time.

Both countries seem to have firmly overcome the 'hesitations of history'² to chart a bilateral relationship which though still nascent, has grown substantively, especially in the strategic and defense realms. The trade and economic partnership on the other hand remains well below the potential.

From US \$0.2 billion in 1992³, bilateral trade has grown to US \$5.4 billion in 2017-2018 (though this is down from a high of US \$6.1 billion in 2012-2013) – these figures do not include defense trade.⁴ In this period, non-defense exports from India to Israel totaled US \$3.36 billion while imports from Israel into India were valued at US \$2.1 billion, leaving a trade surplus of US \$1.29 billion in India's favor. Defense trade figures are hard to come by but according to one Indian media report, India procures some US \$1 billion of Israeli defense technology and equipment annually.⁵

The overall trade figures however represent only 0.71% of India's total trade, making Israel, India's 39th largest trading partner in 2017-2018 – behind countries like Nigeria, Kuwait, Belgium and Malaysia – and constitutes about 3% of India's trade with the

¹ In September 2003 then Prime Minister, Ariel Sharon visited India, marking the first visit by an Israeli PM.

² 'The hesitations of history', January 18, 2018, *The Indian Express*
[https://indianexpress.com/article/opinion/columns/the-hesitations-of-history-benjamin-netanyahu-india-v-\(inisit-5027479/](https://indianexpress.com/article/opinion/columns/the-hesitations-of-history-benjamin-netanyahu-india-v-(inisit-5027479/)

³ <https://www.indembassy.co.il/pages.php?id=14#.VUf6GZO8ruE>

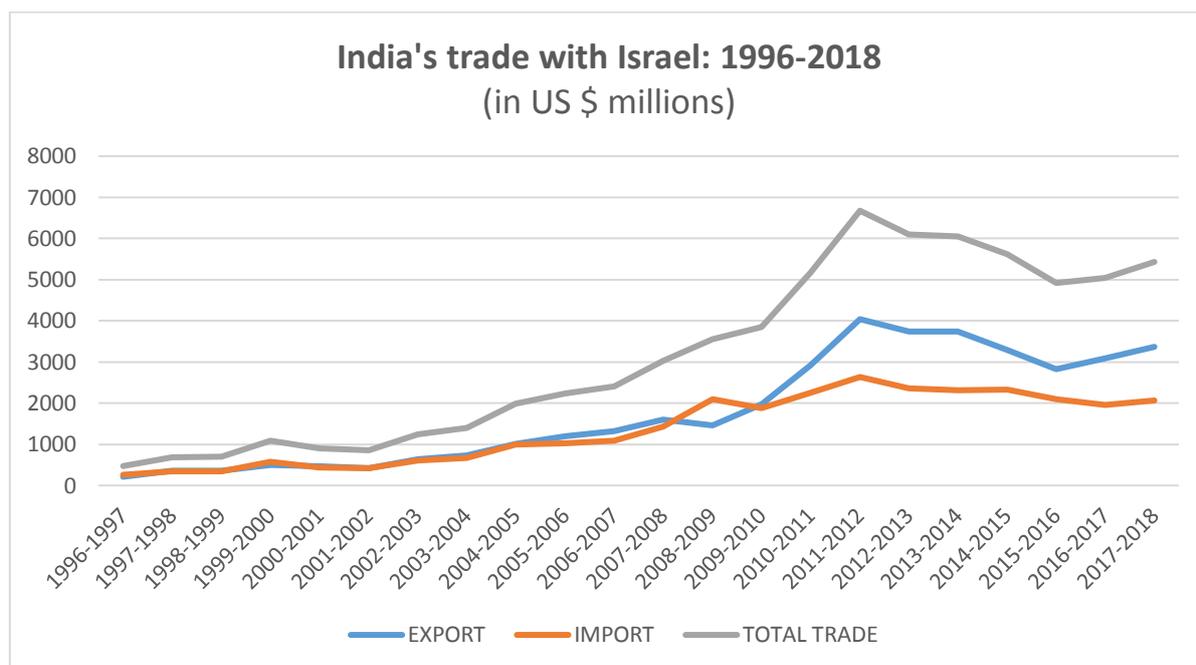
⁴ This is as per the Indian embassy, Tel Aviv <https://www.indembassyisrael.gov.in/pages.php?id=14#.W5qf2-hKg2w>

⁵ 'Independent trajectory for India-Israel ties', *Live Mint*, January 12, 2018
<https://www.livemint.com/Opinion/a9DH5GrWffJsCMU559mF8N/Independent-trajectory-for-India-Israel-ties.html>

Middle East as a whole. Similarly, trade with India represents a small proportion of Israel's global trade.

Israel's Foreign Trade Administration and the Israel Export Institute have been signaling India in the last 10 years as an important target market for the promotion of trade as well for investments.

Graph 1: India-Israel Trade Relationship



Source: Export Import Databank, Ministry of Commerce and Industry, Government of India

An examination of the top items traded between the two countries in 2017-2018 also shows that certain products dominate two-way trade flows – such as diamonds (37.3% of the total trade – down from 70% in 2004), mineral products (20.1%), machinery and mechanical appliances, electric machinery (13.6%), products of chemicals and allied industries (10.6%), and base metals etc. (3.1%). The dominance of diamonds cannot just be attributed to the fact that India and Israel are dominant actors in the diamonds industry. Israeli diamond exports for example, account for just over 23% of the country's total global exports.⁶

⁶ Observatory of Economic Complexity (MIT Media Lab) data on Israel: <https://atlas.media.mit.edu/en/profile/country/isr/>

The Bilateral Trade Partnership

India's Exports to Israel

India's top exports to Israel in 2017-2018 were mineral fuels; pearls and precious-semi precious stones etc. (mainly diamonds); organic chemicals; machinery and mechanical appliances; electric machinery and parts; plastics; aerospace and parts etc. Though they still figure in the list of India's most valuable exports to Israel, exports of products like mineral fuels, and pearls and precious and semi-precious stones etc. have declined by 38% and 11% respectively.

Products from India accounted for 2.7% of Israel's total imports.⁷

Table 1: India's top exports to Israel in 2017-2018

Commodity	Amount (in US \$ millions)	% of total exports
Mineral products	1,056.34	31.40%
Natural or Cultured Pearls, Precious or Semiprecious Stones, Precious Metals, Metals Clad with Precious Metal, and Articles Thereof; Imitation Jewelry; Coin (<i>includes diamonds</i>)	1,031.32	30.65%
Machinery and Mechanical Appliances; Electrical Equipment; Parts Thereof; Sound Recorders and Reproducers, Television Image and Sound Recorders and Reproducers, and Parts and Accessories of Such Articles	333.8	9.90%
Products of the Chemical or Allied Industries	243.22	7.23%
Textile and Textile Article	151.2	4.50%
Others	149.64	4.45%
Vehicles, Aircraft, Vessels and Associated Transport Equipment	146.28	4.35%
Plastics and Articles Thereof Rubber and Articles Thereof:	94.01	2.80%
Vegetable products	84.14	2.50%
Base Metals and Articles of Base Metal:	73.24	2.17%
TOTAL	3,364.05	

Source: Source: Export Import Databank, Ministry of Commerce and Industry, Government of India

Israel was India's 28th largest destination of exports in 2017-2018.

India's Imports from Israel

India accounts for 3.5% of Israel's total export trade.⁸ In 2017-2018, top Israeli imports into India included pearls and precious-semi precious stones etc. (mainly diamonds); electric machinery and parts; fertilizers; optical, photographic instruments; machinery and mechanical appliances etc.; and organic chemicals.

⁷ Ibid.

⁸ Ibid.

Table 2: India's top imports from Israel in 2017-2018

Commodity	Amount (in US \$ millions)	% of total imports
Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation jewelry; coin (<i>includes diamonds</i>)	995.45	48.10%
Machinery and Mechanical Appliances; Electrical Equipment; Parts Thereof; Sound Recorders and Reproducers, Television Image and Sound Recorders and Reproducers, and Parts and Accessories of Such Articles	408.39	19.76%
Products of the Chemical or Allied Industries	332.47	16.10%
Optical, Photographic, Cinematographic, Measuring, Checking, Precision, Medical or Surgical Instruments and Apparatus; Clocks and Watches; Musical Instruments; Parts and Accessories There of	101.56	4.90%
Base Metals and Articles of Base Metal	93.41	4.50%
Others	48.89	2.36%
Mineral Products	35.9	1.74%
Plastics and Articles Thereof Rubber and Articles There of	27.24	1.32%
Vehicles, Aircraft, Vessels and Associated Transport Equipment	22.91	1.10%
TOTAL	2,066.51	

Source: Export Import Databank, Ministry of Commerce and Industry, Government of India

Trade in Services

According to the Indian Ministry of External Affairs, “though reliable figures of services are unavailable, it is estimated that almost 75% of bilateral trade in services flow from India to Israel.”⁹

Two-way Investments

According to the Department of Industrial Policy and Promotion (DIPP), between 2000 and 2018, companies from Israel invested about US \$147 million in India. However, since a lot of investments are routed through other countries like Mauritius, US etc., it is possible that the number is much higher. Sectors in India that have attracted Israeli investments include renewable energy, telecom, real estate, water technologies etc. In recent years, Israeli institutional investors have begun to make India specific allocations through mutual funds and passive instruments (ETFs). Israeli private equity exposure to India is however still restricted.

⁹ https://www.mea.gov.in/Portal/ForeignRelation/Israel_13_12_2016.pdf

There is less data available on investments from India into Israel though there are several anecdotal examples of acquisition activity, R&D and greenfield investments by Indian companies in sectors ranging from agriculture, technology, manufacturing etc.

Current Bilateral Institutional Frameworks

- **Industrial and R&D Programs:** An MOU on Industrial Research and Development Initiative (IIRD) was signed in 2005 between Department of Science & Technology, India and Ministry of Industry, Trade & Labor, Israel to promote bilateral industrial R&D. Both countries have set up a joint industrial R&D fund, *i4RD*, which funds joint bilateral R&D projects, involving at least one Indian and one Israeli company. The framework is jointly implemented by Global Innovation and Technology Alliance (GITA), an initiative of India's Department of Science & Technology and Confederation of Indian Industry (CII); and MATIMOP, Israeli Industry Centre for R&D. CII serves as the Secretariat for GITA.
- **India-Israel CEOs Forum:** The India-Israel CEOs Forum convened for the first time in July 2017 in Tel Aviv during the visit of PM Modi and had a follow up meeting during Israeli PM Netanyahu's subsequent visit to India.
- **India-Israel Forum:** a track II India-Israel Forum was established between Ananta Aspen Centre – CII – Tel Aviv University in 2007 and has been running successfully over the past decade. The forum's deliberations and recommendations have helped fuel the bilateral agenda to a large extent while cementing deep friendships and sustaining the collaborative dialogue.
- **India-Israel Agriculture Cooperation:** the 2012-2015 action plan expanded agricultural cooperation to nine states in India and 22 Center of Excellence have been inaugurated so far (of 28 planned). The fourth phase of the joint action plan was agreed to in 2017 when the partnership was re-branded as "Strategic Partnership in Water and Agriculture" .
- **India-Israel Joint Committee on Science and Technology:** a lot of cooperation has resulted between India and Israel on the science and technology front and in 2017, the Joint Committee was further mandated "to explore the possibility of further advancement of scientific collaboration including setting up of Networked Centers of Research Excellence in the cutting-edge areas of mutual strength and interest (such as big data analytics in healthcare.)"

Sectoral Cooperation and Prospects for Expansion

Defense trade

Between 2013-2017, India became the top purchaser of all Israeli defense exports with 49% of the total share.¹⁰

In 2017, of the total defense exports by Israel (US \$9.2 billion), 56% went to Asia and the Pacific, mainly attributable to the US \$2 billion defense contract Israel signed with India. Under this agreement, Israel Aerospace Industries will supply India with advanced Barak 8 air defense systems worth US \$1.6 billion including missiles, launchers, communications devices and command, control and radar systems.^{11 12}

Both countries have agreed that future developments in the defense sector should focus on joint development of defense products, including transfer of technology from Israel, with a special emphasis on the 'Make in India' initiative. This is already occurring in the private sector with the forging of agreements and joint ventures between several Indian and Israeli companies.

For example, in 2016, Elbit Systems' ISTAR Division signed a pact with Aero Defense Systems & Technologies (a unit of the Adani group) and Alpha Design Technologies to produce Unmanned Aircraft Systems (UAS) in India; Dynamatic Technologies Ltd (DTL), Israel Aerospace Industries Ltd. (IAI), and Elcom Systems announced a partnership in 2017 to cater to India's UAV market; in 2017, Punj Lloyd and the Israeli Weapons Industries (IWI) inaugurated a small weapons manufacturing plant in Madhya Pradesh. Collaborations in the SME sector are also coming up – such as the MoU signed in 2017 between Taneja Aerospace & Aviation Ltd. (TAAL) of India and Israeli Aerospace Industries' unit, Golan Industries Division, to partner to develop and produce civil and military aircraft crashworthy-seats.

However, there is currently no formal mechanism between Israel and India to promote defense industry cooperation for developing sensitive defense technologies.¹³ Since Israel has distinct advantages in advanced weapons systems (rather than main platforms, such as fighter aircrafts or naval vessels), these areas can be the basis for continued collaboration under co-development and co-production. A formal mechanism to advance dialogue between industry and government is hence critical.

In cybersecurity too, there is great potential for India-Israeli cooperation. In the US \$80 billion global market for cybersecurity products, Israel currently commands 10% market share.¹⁴ There is clearly much room for sharing best practices and

¹⁰ Trends in international arms transfers, 2017, SIPRI, March 2018 https://www.sipri.org/sites/default/files/2018-03/fssipri_at2017_0.pdf p.2

¹¹ 'Israel's arms exports spike, hitting \$9 billion', *Haaretz*, May 02, 2018 <https://www.haaretz.com/israel-news/israel-s-defense-export-sales-exceed-record-9-billion-1.6052046>

¹² 'Weapons sales are on the rise: here are the top 10 countries exporting arms around the world' *Business Insider*, March 16 2018 <https://www.businessinsider.com/top-countries-exporting-weapons-arms-sales-2018-3#8-israel-3>

¹³ Deliberations from the 10th India-Israel Forum held on 13th November 2017, Tel Aviv

¹⁴ Ibid

collaboration. For instance, both Wipro (through Wipro Ventures) and Tech Mahindra¹⁵ have either made investments or forged alliances in the realm of cyber with Israeli partners. Wipro Ventures have to date invested in two Israelis VCs and in leading start-ups like, Insights.

¹⁵ Israel Aerospace teams with Tech Mahindra on cybersecurity, 3 October 2018, Globes, <https://en.globes.co.il/en/article-israel-aerospace-teams-with-tech-mahindra-on-cybersecurity-1001255025>

Technology and Research & Development

Exports of technology related products from Israel to India is less than 5% of Israel's overall exports, even though the technology market in India is huge and growing fast. Israel has strengths in areas such as semiconductors, sensors, optics, chips etc. – given India's fast-growing IT industry and the strong demand for electronics¹⁶, there may be room for collaboration between the two countries in this sector. Indian corporates and venture capitalists should consider investing in Israeli companies towards developing India specific technologies and products.¹⁷

In Israel, early investments in the aviation and defense sectors led to innovative spin off effects into the country's hi-tech industries including medical devices, electronics, computer software and hardware, telecommunications, etc. Today, over 250 MNCs have set up their R&D units in Israel.¹⁸ Israel's total R&D spend (government, private sector and multilateral research and development funding) in 2016 was pegged at 4.25% - the highest (along with South Korea) amongst all OECD countries.¹⁹ 30% of this investment is channeled through Israel's universities that not only engage in basic research but have also developed expertise in commercializing academic IP into marketable products.²⁰ Israel has also been a prolific beneficiary of EU funded research and innovation programs since 1996. Between 2007-13, Israeli public and private institutions participated in over 1,500 projects and some €780 million (about US \$880 million) in EU research funding went to Israeli participating entities.²¹ Some amount of R&D tie ups by private companies is already occurring.

One notable program whereby an Indian corporation has sought to tie up with an Israeli University is the Momentum Fund, anchored by Tata Group. The fund commercializes IP developed by Tel Aviv University (TAU) faculty. Moreover, TAU has sponsored research engagements with Wipro and TCS. Sun Pharma has engaged in projects with the Technion and the Weizmann Institute. In 2015, India based Tech Mahindra announced a partnership with U.S.-Israeli Comverse Inc to set up a research and development centre in Israel.

Deeper collaboration between Israeli and Indian R&D focused institutes would be necessary to help cross-pollinate ideas and best practices. Similarly, there may be room for Israeli companies to emulate companies like Amdocs, which today has a larger workforce in India than Israel and sees India as a hub for its activities. Companies like Checkpoint and Mellanox also seem natural candidates, though the scope is limited as Israel has created very few truly global companies.

¹⁶ 50% of electronics sold in India are imported while almost 75-80% of the components that feed into the electronics sector are imported. <https://thewire.in/economy/worlds-largest-mobile-phone-plant-india-electronics-import>

¹⁷ Deliberations from the 10th India-Israel Forum held on 13th November 2017, Tel Aviv

¹⁸ <http://www.mfa.gov.il/mfa/aboutisrael/economy/pages/economy-%20sectors%20of%20the%20economy.aspx>

¹⁹ <https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm>

²⁰ https://www.slideshare.net/innovation_workshop/technology-transfer-the-secret-engine-behind-israeli-success

²¹ During the 20 years of partnership in the Horizon 2020 program, Israel invested €1.375 billion and secured €1.7 billion of funding. 3,080 Israeli projects were approved. See: http://europa.eu/rapid/press-release_IP-14-633_en.htm and

<http://mfa.gov.il/MFA/InnovativeIsrael/Economy/Pages/20-years-of-Israeli-participation-in-Horizon-2020-10-January-2017.aspx>

According to the Israel Export Institute, the country's high-tech exports represented over 45% of the US \$102 billion in total exports of goods and services in 2017.²² However, computing services and software make up the largest segment of high-tech service exports²³ – these are areas where the Indian IT services industry has substantial strengths. India's high-tech sector has traditionally been a services industry – whereas Israeli exports are product driven. A priori, many synergies are apparent and in theory Indian IT service providers could serve as partners for distribution of Israeli products. Wipro and Wipro Ventures have been especially pro-active in developing such synergies through investments in Israeli VC funds and start-ups. Tata Capital has been a long-standing limited partner in Israel's Pitango Ventures. TCS has developed a program to engage with local start-ups through its Co-Innovation Network (COIN).

Another area for synergy is in the realm of smart mobility and electric vehicles. Israel has developed a robust ecosystem around sensors and big-data that facilitates smart mobility (Waze and Mobile Eye) and India is a major car manufacturing hub.

One further challenge is that India is a very price sensitive market and Israeli innovation is designed and mainly geared towards the US and Europe, which pay a higher premium for technology. India on the other hand offers tremendous scale to Israeli technology products. Indian consumers can ill afford the Israeli price points and Israeli technology companies seem unwilling to be flexible on this front. Moreover, many Israeli startups find selling in India challenging, especially since sales cycles tend to be long and slow.

These dynamics could well change as the full impact of key reforms in India like the Goods and Services Tax (GST), Unified Payment Interface (UPI), and Real Estate (Regulation and Development) Act, 2016 (RERA) play out in the coming years. GST, for example, will lead to consolidation in the Indian market as the country undergoes a palpable shift from un-organized to organized retail and un-branded to branded consumption as well as creation of a single market through the country. Examples of such a trend abound – or instance, Reliance Jio has made data services exceedingly inexpensive, driving demand for digital content, buttressing trends. Such developments will lead to greater economies of scale and allow dominant players greater pricing power. This may in turn imply that there will be a technology premium in India over time.

RERA will create similar effects in the real estate sector and the construction industry. The burgeoning build-tech sector in Israel, which harnesses Internet of Things (IoT) and big data may also benefit.

Another dramatic development that could be of benefit to Israeli FinTech startups is the rising use of the Unified Payment Interface - Application Programming Interfaces (API) stack for e-commerce in India which presents tremendous new opportunities in a vast and dynamic market.

²² <https://itrade.gov.il/us-dc/2018/06/21/israeli-high-tech-service-exports-drove-to-a-high-record-in-2017/>

²³ Ibid

In addition, protecting digital transactions, securing government and private networks from malicious activity, etc. will create huge opportunities for the Israeli cyber industry.

On the G-to-G side, there has been some amount of traction on advancing technology and R&D cooperation. The Prime Ministers of India and Israel in January 2018 announced the India-Israel Industrial R&D and Technological Innovation Fund (I4F) worth US \$40 million (contributed by each side over a five-year period) to promote, facilitate and support joint industrial R&D projects between companies from India and Israel. The objective is for these efforts to lead to successful commercialization in the areas of water, energy, agriculture, healthcare, and information & communication technologies (ICT). This is a good step in the right direction – sustained and intensive engagement between Israeli and Indian technology companies can yield dividends across multiple sectors and disciplines.

One pressing need is to support proof of concepts (POCs) and in doing so creating “success stories”. It is not uncommon for Indian corporations to find Israeli technology that is of interest but the budgets for POC are often not available.

Start Ups and Innovation

Israel has earned the moniker ‘Start Up Nation’ – emblematic of the country’s innovative and entrepreneurial spirit and the creation of an ecosystem that has been responsible for the development of cutting edge technologies and products that have made global impacts. Between 1999 and 2014, Israelis started 10,185 companies, with half of them still in operation and 2.6% having annual revenues of over US \$100 million.²⁴

There is however concern that many of Israel’s startups are being purchased by foreign buyers and the firm is either shut down after the sale, with the intellectual property (IP) moving abroad, or the firm is turned into an R&D center for the parent company. With India’s booming and innovative start up culture and the huge base, there may be a ripe opportunity for Israeli startups to re-invent themselves – to adapt technologies for the local Indian market and expand into a still burgeoning market.²⁵ This area has become a growing focus of Israeli policy thinking. Based on early work by the likes of the Pears Program for Global Innovation, the Israeli Innovation Authority has become increasingly supportive of such efforts.

A BCG study for the India-Israel Forum in 2016 focused on the opportunity for Israeli innovation to address the next billion – defined as gross annual incomes of US \$3,300 to US \$7,400 per annum. Comparing Israel’s core strengths and advantages in innovation to the trends and needs of the next billion in India, the study highlighted Consumer Fintech and Communications/Mobile infrastructure technologies as top strengths for an Israeli drive into this space in India.²⁶ The need in India is huge across a multitude of sectors and there is hence a real opportunity to work together with Indian startups and entrepreneurs to create new products and technologies. The BCG study

²⁴ <http://intpolicydigest.org/2015/04/25/can-israel-become-the-next-tech-capital/>

²⁵ ‘Israel’s high-tech boom is double-edged sword’, January 19, 2015, *Reuters*, <https://www.reuters.com/article/israel-tech-ma-idUSL6N0UR1GO20150119> accessed Sept 13, 2018

²⁶ BCG Study prepared for the eight Forum, Draft of 25 May 2016.

highlighted the following three obstacles with regard to increasing Israeli engagement in this realm:

- Limited awareness of the opportunity and its size
- Limited funding
- Difficulties in penetration

A major issue, again is that there is no mechanism to subsidize the cost of pilot projects and POCs.

One initiative that is yielding good results on the startups side is the online platform, 'India-Israel Innovation Bridge' which was set up during PM Modi's visit to Israel in 2017, to bring together Israeli and Indian startups to combine forces and develop solutions that address challenges in agriculture, water and digital health. The idea was to leverage Israel's strengths in technology, with Indian market access.²⁷ From the initial pool of 150 applicants, six Israeli startups made it as finalists after undergoing six months of training and workshops on Indian markets as well as meetings with officials and senior executives – they will be working on projects in areas like healthcare, agriculture and water management tailored specifically for India.²⁸ By all accounts, the program has been quite successful.

The Confederation of Indian Industry has also signed an MoU with the Tel Aviv University for the upcoming CII National Start-Up Center in Amravati. The MoU aims to promote the entrepreneurial potential of the youth through practical curriculum and initiatives at the university level in addition to creating linkages with other organizations dealing with youth economic empowerment.

Programs like these could help create 'win-win' partnerships while familiarizing each country with the startups ecosystem in the other such that the strengths of each can be leveraged towards mutual benefit.

Smart Cities

Israel's hi-tech solutions to challenges faced in major metropolises could be a potentially huge area of engagement between the countries. In particular, waste, water and traffic management technologies from Israel could be applicable in India, though these will need local adaptation.²⁹

India's smart cities mission launched under the Modi government calls for at least two water projects in each smart city – given Israel's enormous strengths in water management, this is a promising area for collaboration.³⁰

Internet of Things (IoT), Telecom and Mobile

²⁷ <http://economy.gov.il/English/NewsRoom/PressReleases/Pages/IndiaIsraelInnovationBridgeLaunches.aspx>

²⁸ "Indo-Israel collaboration brings 6 young innovative Israeli start ups to India", *Sify Finance*, August 04, 2018 <http://www.sify.com/finance/indo-israel-collaboration-brings-6-young-innovative-israeli-startups-to-india-news-business-sieqnbhaiihfb.html>

²⁹ <https://www.jpost.com/Jpost-Tech/How-is-Israel-leading-the-way-in-smart-city-tech-540658>

³⁰ Deliberations from the 10th India-Israel Forum held on 13th November 2017, Tel Aviv

Israel is known for its robust technological industry, and the mobile segment is no different. Israel's mobile technology ecosystem is diverse and includes startups, R&D centers and accelerators of multinational tech giants and legacy companies that were founded more than 30 years ago. IoT is emerging as one of the most prominent domains in Israel's technological industry. In 2016, Israeli IoT companies received US \$132million in investments, compared to just U \$25 million in 2015, reflecting a 430% increase. Most of the Israeli companies operating in the IoT subsector leverage Israel's proven strengths in domains such as cyber security, bigdata and predictive analytics, agri-technologies and healthcare. Israeli dominance in the Augmented Reality (AR)/Virtual Reality (VR) sector is prompted by its experience in military hardware development (such as "heads up display" - mounted helmets for pilots and VR battlefield simulations for soldiers), as well as a video & computer vision ecosystem. Israeli companies operating in the global mobile industry have many international clients that are focused on the U.S. (a leading market), and many operate offices located in the U.S. Nevertheless, a surprising number of Israeli companies operate offices in China or in other Asia Pacific countries, such as Singapore and Hong Kong.

As the Digital India initiative takes shape, demand for technology related services such as building the broadband infrastructure; creating identity solutions, payment systems, web or mobile based delivery structures and so on, is expected to increase. The dramatic change of skills and the opportunities this development presents to Israeli companies is wide, with its vast potential for R&D partnerships.

Water and Agriculture

Over the years, Israel has developed globally acknowledged expertise in water management through an integrated infrastructure, advanced technologies in desalination, preventing rainwater runoff, reusing treated wastewater for irrigation, using aquifers as reservoirs, drip irrigation etc.³¹ Similarly, Israel has also developed deep expertise in cultivation and precise farming techniques to advance its agricultural sector.

During PM Modi's visit to Israel in July 2017, India and Israel agreed to establish a "Strategic Partnership in Water and Agriculture". This will focus on water conservation, waste-water treatment and its reuse for agriculture, desalination, water utility reforms, and the cleaning of the Ganges and other rivers using advanced water technologies. It will also include the reinforcement and expansion of the existing Centres of Excellence (COE) under the stewardship of the Israeli Ministry of Foreign Affairs (MASHAV) and the Ministry of Agriculture of India to promote commercially viable business models involving Farmer Producer Organizations (FPOs); the provision of quality planting material; and the transfer of post-harvest technical know-how and market linkages involving the private sector through PPP, B2B & other models. The

³¹ <https://openknowledge.worldbank.org/handle/10986/28097>

two leaders also agreed on the establishment of a Joint Working Group to steer this partnership.

Joint efforts such as the Centers of Excellence set up under the Indo-Israeli Agriculture Plan for example are helping make tangible positive impacts in the lives of Indian farmers by bringing advanced Israeli agricultural technologies which combine water conservation methods. Scaling up such efforts across different states could help expand the collaborative footprint in the agriculture sector. One cardinal impediment in the water space remains that technologies like drip irrigation are contingent upon subsidies as consumers of water in rural India (farmers) as well as residents in urban India do not pay for the full price of water. Until there is a real market for water, any Israeli work in the water space (outside of servicing industrial water) will be contingent upon subsidies and state funding.

Advanced Manufacturing/Industry 4.0

Advanced manufacturing is a promising sector for engagement as the "Make in India" program is helping spur the development of industrial corridors and industrial townships in India. Israel's manufacturing sector is based on intensive and sophisticated equipment, tools and R&D. Due to lack of natural resources and raw materials, Israel's advantage in the global markets stems mainly from highly qualified labor force, strong scientific institutions and a relatively high investment in R&D (compared to GDP & GDP per capita) on behalf of both government and business sectors. Israeli manufacturers differentiate themselves within global markets through scientific creativity and technological innovation. Israel is ranked highest among OECD members when it comes to researchers per number of employees and investments in advanced manufacturing. This creates an opportunity for transfer of knowledge, services, technologies as well as cooperation in advanced manufacturing R&D.

Travel and Tourism

Further enhancement of air links between India and Israel, issuance of long term visa to tourists and businesses have been identified by the two countries as important enablers to promote people to people contacts. The introduction of the Air India flight to Israel (now four times a week) has dramatically transformed the movement of people. The flight times are short, and the costs have been reduced. This makes the ease of doing bilateral business easier. Air India has rapidly moved to dominate market share of India-Israel travel and there has been a surge in Israeli tourists visiting India.

Over-Arching Issues

- **The Optics of Success:** There are not enough India-Israel success stories yet. The perceived failures appear to outweigh successes. Infosys' acquisition and subsequent attempts to sell the Israeli company, Panaya is a case in point.³² That said, several large transactions have been successful: Sun Pharma-Taro Pharma, Wipro-Givon and Firodia-Rivulis, to name a few.
- **Bilateral Investments:** cross border investments remain low and Indian investments in Israel have not always been successful. Many Israelis have had negative experiences with real estate investments in India. The cost of capital in India is also very high and Israeli VC funds do not generate attractive returns to compensate for the investment. As a result of exchange controls, it is technically very difficult for Indian investors to invest in Israeli funds. Policy initiatives are needed to help ease cross border investing.
- **An India-Israel Free Trade Agreement** is key and will make huge difference to boost confidence and change mindsets

³² 'Infosys struggles to sell distressed asset Panaya', *Live Mint*, July 20, 2018
<https://www.livemint.com/Companies/5HFE2JoZJwvcFI7tgBRI1M/Infosys-struggles-to-sell-distressed-asset-Panaya.html>

Recommendations and Conclusion

Given the rapid deepening of the India-Israel partnership, having overcome historical factors, and geopolitical realities, the two countries see eye-to-eye on various strategic imperatives including defense, cybersecurity, maritime cooperation and so forth. There are however a multitude of sectors where the potential remains untapped and which can help promote the bilateral trade and commercial agenda in robust ways. The time is ripe for industry and institutions on both sides to work together to realize the full potential of this relationship. Some suggestions that can help propel the bilateral partnership still further are as follows:

- Complementarities in strengths such as entrepreneurship, education, and R&D need focused attention. Greater academic and B-to-B linkages could be hugely beneficial to both countries. Internship programs for students offered by the private sector in each country could help accelerate this process further.
- There is an urgent need for greater awareness raising amongst private sector players with regard to the trade and investment opportunities available. A sustained investment promotion initiative, anchored by the embassies in each country in partnership with business chambers like CII could help with messaging and outreach. Greater familiarization and sustained contact through investment forums, targeted delegation visits, workshops, exchange programs etc. would help in the process of de-mystification. There is also a need to build greater trust within the business community – a lot has changed in India over the past few decades and this message needs to permeate through the Israeli private sector (beyond defense companies).
- There needs to be a clear vision laid out for prioritizing sectors and industries which can help push the bilateral trade partnership further (whether hi-tech, agriculture, startups, water, defense etc.). While the bilateral political partnership has progressed far beyond what either side could have hoped, the economic and commercial side has not kept pace. Both in terms of trade and cross flow of investments, this is a critical area that should be addressed. Focused working groups in key sectors comprising of major businesses on each side should be considered – achievable and demonstrable deliverables through such working groups would help accelerate economic partnership.
- Greater connectivity through more frequency of flights, ease of securing visas and easier transit would help in building much needed people-to-people contacts. The 2017 Joint Statement released after PM Modi's visit to Israel mentioned that both sides should look at granting of multiple entry visas to business people for up to five years. Such a move would be welcomed by the business community in both countries.
- Hand holding of Small and Medium Enterprises (SMEs) through government initiatives and outreach by CII would also be helpful in advancing another tier of business collaborations. In both India and Israel, SMEs make up the majority of business enterprises, and this sector needs a leg up to forge business linkages and explore opportunities in each nation. Two-way SME business delegations in focused sectors should be looked at with specific B-to-B networking built into the agenda. CII could work with Israeli industry chambers for such initiatives.

The Israel Export Institute can support SMEs by providing sectoral and vertical specific guidance, business culture gaps training, marketing consultation, and training courses. Such support programs will advance the success rate and resilience of future Indian-Israeli partnerships. In addition, supporting SMEs by subsidizing their participation in relevant and pre-identified tradeshows and creating support network through IEI personnel and the Foreign Trade Administration attaches could further help provide a robust support ecosystem for SMEs that don't always have the resources to venture into foreign markets on their own. Similar activities could be undertaken on the Indian side by CII Invest India and Ministry of Commerce and Industry.

- Encouraging Israeli VC funds to familiarize themselves with India and understand the needs of the market, engage the major players in relevant sectors (IoT, cyber, e-commerce) and empower their portfolio companies seeking to work with India.
- Initiatives like the India-Israel Industrial R&D and Technological Innovation Fund and the India-Israel Global Innovation Technology Alliance (GITA) as well as the India-Israel Innovation Bridge are important initiatives that can help advance technological linkages and collaborations – such programs need to be replicated and expanded wherever feasible.
- Completing a Free Trade Agreement would be a major confidence booster. An agreement that encompasses freedom of trade while also facilitating bilateral investments would certainly help advance the partnership. Mutual Recognition Agreements (in services for example) should also be part of an overall treaty.
- The 2017 Joint Statement mentioned that “negotiations would be conducted on an agreement for the Protection of Investments in order to encourage bilateral investments from both sides” . Indian and Israeli businesses would welcome such an agreement. Establishing a bilateral fast-track mechanism for Israeli investments in India and Indian investments into Israel could further provide a ‘clearing house’ for bottlenecks and speed up the pace of investments on both sides.

For the first time perhaps, the intent and goodwill on both sides is matched by what is realistic and possible to execute on the ground – this is certainly being borne out in terms of the strategic and geopolitical partnership. India and Israel must not lose the window of opportunity to advance the agenda on the commercial and trade side of the bilateral partnership also.



Confederation of Indian Industry

Indo – Israel Expert Group Meeting

on

Electronics (with focus on Semi-Conductors)

5 December 2018, Mumtaz Hall, Hotel Taj Palace, New Delhi

9:30 – 9:40 Hrs	<p><u>Welcome remarks & Brief on Objective and Framework of the Session:</u></p> <p>Mr. Salil Singhal Chairman, Secure Meters Ltd. and Member, CII National Council & Dr. Giora Yaron Chairman, Executive Committee, Tel Aviv University</p>
0940 - 0955 Hrs	<p><u>Presentation on the finding of the Study on Semi-Conductors</u></p> <p>Mr. Eli Tidhar, Partner, Head of Strategy Group, Deloitte Israel</p>
0955 – 1010 Hrs	<p><u>A National Security Perspective:</u></p> <p>Mr. Ophir Shoham Managing Partner, Mida Ventures & Senior Official, Indian Delegation</p>
1010 - 1025 Hrs	<p><u>Government Perspective:</u> <i>Why Government should invest in SemiConductors?</i></p> <p>Mr. Aharon Fogel Chairman, ZIM Integrated Shipping & Senior Government Official</p>

1025 - 1040 Hrs	<p><u>Private Sector Perspective:</u> <i>The benefits for Industry and Job-creation</i></p> <p>Mr. Dan Vilenski Board Member, Israeli National Nanotechnology Initiative & Mr. K R S Jamwal Executive Director, Tata Industries Ltd</p>
1040 – 1100 Hrs	Tea Break
1100 – 1215 Hrs	Open House Discussion
1215 – 1230 Hrs	Wrap Up Session
1230 Hrs	Networking Lunch

List of Participants

Israel

1. **Aharon Fogel** – Chairman, ZIM Integrated Shipping
2. **Dr. Giora Yaron** – Chairman of the Executive Committee, TAU
3. **Ophir Shoham**– Former Director of Defense R&D Directorate in IMOD/IDF and Managing Partner Mida Ventures
4. **Prof. Isaac Ben Israel** – Chairman, Israel Space Agency
5. **Nir Gilad** – Former President, Israel Corporation
6. **Adiv Baruch**, Chairman of the Israel Export & International Cooperation Institute, Chairman of Jerusalem Technology Investments Ltd and Maayan Ventures
7. **Dan Vilesnski** – Former Chairman/CEO of Applied Materials Israel, Former CEO KLA-Tencor Israel, Board Member at Israeli National Nanotechnology Initiative
8. **Eli Tidhar** – Partner, Strategy Consulting Deloitte, Consumer and Industrial Products Leader, Deloitte Consulting
9. **Prof. Yosi Shacham**, The Bernard L. Schwartz chair for nano scale information technologies, Department of Electrical Engineering
10. **Barak Granot**, Counsellor, Head of Economic & Trade Mission, The Government of Israel Economic & Trade Mission – Embassy of Israel, New Delhi

List of Participants

India

1. **Salil Singhal**, Chairman, Secure Meters Ltd. and Member, CII National Council
2. **Dr. Ajay Aggarwal**, Head-Smart Sensors, CSIR
3. **Ashwini Aggarwal**, Director, Government Affairs, Applied Materials India Pvt. Ltd.
4. **Prof. Santanu Chaudhury**, Director, CEERI
5. **Dr. Debashis Dutta**, Former Scientist 'G', Ministry of Electronics and IT (MeitY)
6. **K R S Jamwal**, Executive Director, Tata Industries Ltd.
7. **Amit Kharabanda**, MD, MyBox Technologies
8. **Keerthi Lal**, Vice President-Policy, IESA
9. **Amrit Manwani**, Chairman, Sahasra Electronics Ltd.
10. **P V G Menon**, Vice President, Twinstar Display & Ex-President, IESA
11. **Dr. B K Murthy**, Scientist 'G' and Group Coordinator, R&D in IT, MeitY
12. **Suraj Rengarajan**, CTO, Applied Materials India Pvt. Ltd.
13. **Vinod Sharma**, Chairman, CII National Committee on ICTE Manufacturing
14. **Vivek Sharma**, Managing Director, STMICROELECTRONICS Pvt. Ltd.
15. **Inderdeep Singh**, President, Continental Device India Ltd.
16. **Surinder Singh**, Managing Director, Semi-Conductor Laboratory
17. **Ranjeet Pancholy**

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