



Embassy  
of India  
Zagreb



in



# NEWSLETTER (NOVOSTI IZ INDIJE)

ISSUE NO.12; DECEMBER, 2021

## „TECHNOLOGY“: INDIA-CROATIA STARTUP BRIDGE (Realization of the first T potential)

**The India-Croatia Startup Bridge initiative could create many business opportunities for Croatian companies**



Ambassador of India, Raj Kumar Srivastava and Vjeran Vrbanc, CEO of HAMAG BICRO



Donatella Pauković

In order to strengthen international cooperation and the innovation environment, India and Croatia have launched the India-Croatia Startup Bridge, an initiative that enables startups, investors, incubators, corporations and entrepreneurs from both countries to connect more strongly, expand business and position themselves in the global market. This digital platform forms a kind of bridge between entrepreneurs who have the technological infrastructure to run joint projects. The platform is the foundation for all future bilateral programs aimed at improving the startup ecosystem between India and Croatia.



Veleposlanik Indije istaknuo je u izlaganju da je Hrvatska poznata po startupima iz područja robotike

Participants & speakers from India and Croatia joined virtually for the **INDIA-CROATIA STARTUP BRIDGE** launch ceremony hybrid event, including Joint Secretary, Department for Promotion of Industry and Internal Trade Ms. Shruti Singh, Ms. Aastha Grover, Head at Startup India, Mr. Držislav Škeljo, Minister Counsellor, DCM of Embassy of Croatia in India. Whereas the participants from Croatia presented their views of the Bridge, including Ambassador of India to Croatia Mr. Raj Kumar Srivastava, Mr. Bojan Batinic, Director of the Directorate for Internationalization, Ministry of Economy and Sustainable Development (Croatia), Mr. Vjeran Vrbanc, Chairman of the Board of Directors at HAMAG-BICRO & Mr. Matija Razem, VP of Infobip.

## Curtain raiser of the India-Croatia Startup Bridge!



### INDIA - CROATIA STARTUP BRIDGE

GET READY TO EXPAND YOUR STARTUP TO CROATIA



**Smt Shruti Singh**  
Joint Secretary  
DPIIT



**H. E. Mr. Raj Kumar Srivastava**  
Ambassador of India  
to Croatia



**Mr. Bojan Batinić**  
Director of the  
Directorate for  
Internationalisation,  
Ministry of Economy  
and Sustainable  
Development of  
Croatia



**Mr. Držislav Škeljo**  
Minister Counsellor,  
DCM of Embassy of  
the Republic of  
Croatia in the  
Republic of India



**Mr. Deepak Bagla**  
Managing Director  
& CEO  
Invest India



**Mr. Vjeran Vrbanc**  
Chairman of the  
Board of Directors  
HAMAG-BICRO



**Mr. Matija Ražem**  
VP Business  
Development  
Infobip

New Delhi / Zagreb, December 20, 2021: The India-Croatia Startup Bridge was officially launched in a hybrid mode at the site of BIRD Incubator in Zagreb. The launch ceremony was held as a joint endeavor of HAMAG-BICRO & Startup India. This initiative aims to strengthen the ongoing trade and economic collaboration between India and Croatia. India has similar Startup Bridges with other countries such as Japan, Sweden, Portugal, Republic of Korea, etc. Croatia's innovation and startup ecosystem has been growing at a rapid pace, particularly in the cities of Zagreb, Split, Rijeka and Osijek. The Croatian Digital industry has grown four times faster than Croatia's GDP, and this year it has become even more clear how much impact it has on the nation's exports. There are various opportunities for partnerships between the two countries including funding from EU funds, connecting Indian startups to specific areas of demand in the Croatian economy, and connecting Croatian startups to specific areas of demand in the Indian economy such as Healthcare, Tourism, Agriculture and Food Processing, Fin-tech, Renewables, etc. A Startup Bridge enables startups, investors, incubators, corporates, and aspiring entrepreneurs to connect and provide them with resources to expand and become globalized startups. This bridge essentially serves as a common technology infrastructure platform and will be the foundation for all programs being run for the advancement of the startup ecosystem between India & Croatia.

Salient features include:

- (i) Knowledge Exchange: Comprehensive guides and toolkits that will assist startups in both countries to evaluate expansion opportunities and technology transfers
- (ii) Networking Opportunities: Enable connectivity among startups, mentors, investors, and incubators in relevant sectors from both countries
- (iii) Hosting joint programs: From Investor roundtables to startup exchanges and more, the portal will be a one-stop-shop to host all ecosystem programs
- (iv) Capacity building platform: Access and application to events, competitions and workshops in both countries followed by partnerships with co-working spaces

If you want to find out more about the India-Croatia Startup Bridge, please visit: [LINK](#)

## INDIA-CROATIA STARTUP BRIDGE: Possibilities of collaboration

Croatia, a Mediterranean country located in the very heart of Europe, has become one of the most promising startup ecosystems in EU. The India-Croatia startup bridge aims to leverage expansion opportunities and provide international market access to Indian startups looking to expand in Croatia as well as Croatian startups looking to expand in India.

### Quick Facts | Indian



1.37 billion Population



3rd largest startup ecosystem globally



56,573+ startups registered with Startup India



825.30 million internet users



Average internet speed - 54.43 Mbps



In the first six months of 2021, total funding of USD 10.15 billion was raised by 491 unique startups

### Quick Facts | Croatia



4.1 million Population



37th among top 50 countries that have a startup friendly ecosystem worldwide



600+ startups in Croatia



3.27 million internet users



11th in the world in terms of internet speed – 70 Mbps average



In 2021 more than 300 million dollars invested in Croatian startups

**If you want to find out more about the India-Croatia Startup Bridge please contact:**

 **INVEST INDIA.GOV.IN**

[globalstartup-partnerships@investindia.org.in](mailto:globalstartup-partnerships@investindia.org.in)

HAMAG  BICRO

[startupbridgeIND-CRO@hamagbicro.hr](mailto:startupbridgeIND-CRO@hamagbicro.hr)



## FOCUS: INDIA STARTUP ECOSYSTEM

### Strategy Playbook for Scalable Growth for Startups

- Enhanced Product development based on customer feedback
- Start with a 'digital first' approach and then expand to a robust sales team
- Build a marketing strategy that spans across credibility, reach and brand
- Dynamic pricing flexible to market and business changes
- Pivot & Expand operations to handle rapid growth
- Create a process-driven approach to talent acquisition
- Look to attract funding to provide company-wide investment and mentoring
- Keep technology up to date and in line with operations
- Focus on process maturity with POCs and build on supporting functions

### Strong Tailwinds in Indian Start-Up Ecosystem for Future Growth of Scale-ups

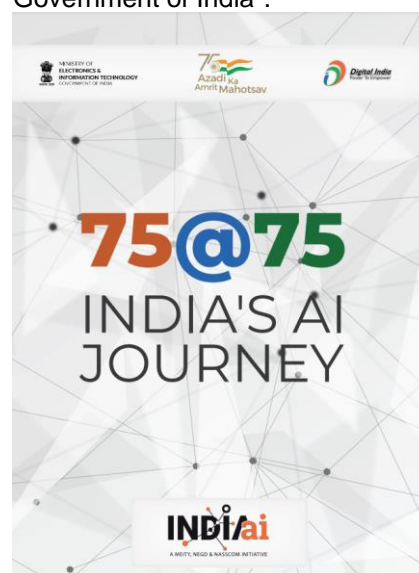
- Indian start-up ecosystem expected to add additional 250+ scale-ups by 2025
- New scale-ups in emerging areas like D2C, EdTech, Logistics, Automotive
- Mature sectors-FinTech, HealthTech, EnterpriseTech, RetailTech will continue to add more scale-ups
- Time to scale expected at ~5 years, however faster funding and larger ticket size rounds will accelerate future growth and valuations

Full report at Link - <https://nasscom.in/system/files/secure-pdf/NASSCOM-scale-ups-from-india-the-next-leap-dec-2021.pdf>



### 75@75 INDIA'S AI JOURNEY

As we enter the 75th year of India's independence, we can all be proud of the progress we made as a nation. Rising from the ashes of centuries-old colonial exploitation and destruction, today, India is not only one of the largest economies in the world, but also a very powerful country on the rise. Thanks to our strong spirit of innovation, eye for inventions, and the inculcation of scientific temper. Today we are empowering millions of Indians by transforming their lives through the application of cutting-edge technologies, as we have seen from Aadhaar to Mangalyaan. --- "Ashwini Vaishnaw Minister of Railways, Communications and Electronics & Information Technology". We live in an era where technology is all pervasive. The pace of advancements in the area of technology is rapid, dynamic and striving to impact every part of modern society. India has been highly receptive to technology and science. With domestic and international revenues standing at \$194 billion in FY 2020-21, India's IT sector is a shining example of this tenet. And now, the nation is poised to leverage the potential of another high value emerging technology – Artificial Intelligence (AI). By 2025, India has earmarked to achieve 1 trillion Dollar Digital Economy and a significant portion of contrition is expected from emerging technologies led by AI. --- "Rajeev Chandrashekar Minister of State for Electronics and IT". As we enter the joyous moment of the nation's 75th anniversary, celebrating Azadi Ka Amrit Mahotsav, we are now making successful strides in a new technological arena, Artificial Intelligence. AI has stood out as one of the frontier technologies, which is shaping the business and service delivery for the present and future. To commemorate Azadi Ka Amrit Mahotsav, the National Artificial Intelligence Portal, a joint initiative from MeitY, NeGD and NASSCOM, is releasing 75 case studies of successful and impactful AI use cases implemented across India by various government agencies, corporates, startups and academia. These use cases will inspire readers and prompt them to explore adoption of AI. --- "Ajay Sawhney Secretary, MeitY, Government of India".



For the complete report, please visit the following [link](#).

## Second T of „TALENT“ Connectivity for both countries

### INDIA-CROATIA WORK SKILL RELATED COMPLEMENTARITIES



For Croatia, to be honest, I didn't even know it existed until recently. The first voice about this, it turned out, beautiful and kind country was when I saw your football team at the World Cup in Russia. Who would have thought that a little later I would end up in the homeland of these amazing guys with checkered jerseys? With these words, VB Ranjith, one of twenty Indian workers who, engaged through the Opatija construction company "Inflow", have been working and building an island wastewater drainage system worth over half a billion kuna. The Krk sewerage network, is being "agreed" and completed throughout Bodulia, thanks to the huge grants of EU funds. Novi List newspaper talked about their everyday life at the other end of the globe, on one of the many infrastructural construction sites in the center of Krk, with a talkative trio of Indian builders, the already mentioned Ranjith and Abhishek Kumar Patel and Thir Malai. Source: [Novi List](#) (published on the 15<sup>th</sup> March 2020)



India in Croatia  
@India\_Croatia

Cricket 🏏 in Croatia 🇭🇷. Indian Shipbuilders working at Brodosplit Shipyard are participating in this regional cricket tournament for the first time as a complete team by themselves. 🇮🇳🤝🇭🇷 @MEAIndia @MVEP\_hr



India in Croatia (Embassy of India, Zagreb)  
Published by Embassy Zagreb · 10 October ·

As part of #AzadiKaAmritMahotsav celebrations, Embassy of India Zagreb in association with Croatian Cricket Alliance, organized 'Ambassador's Cup' cricket match between India11 vs World11 in Zagreb today. Players from different countries based in Croatia participated in the match. Amazing commitment to cricket on a cloudy day in Croatia.

Amrit Mahotsav Ministarstvo vanjskih i europskih poslova Ministry of External Affairs, Government of India Indian Council For Cultural Relations





## Microsoft's Nadella, Google's Pichai, and now Twitter's Agrawal: Why Indian-born leaders dominate American tech's top ranks [Written by BY VIVEK WADHWA]

*The article summarizes the success of Indian-born leaders, including Parag Agrawal, who was appointed as Twitter's CEO, Microsoft's Satya Nadella, Alphabet's Sundar Pichai, and the top bosses of IBM, Adobe, Palo Alto Networks, VMware and Vimeo are all of Indian descent, dominate American tech's top ranks.*



### Culture, as much as education, is key

Vivek Wadhwa came to the U.S. in 1980 and observed the evolution of the Valley's leadership firsthand while founding two technology companies and taking one of them public. Later, at Duke University, I researched what had given Indians like me such an advantage. According to research by University of California at Berkeley professor AnnaLee Saxenian, as of 1999 immigrants accounted for one-third of the scientific and engineering workforce in Silicon Valley, and Indian CEOs were running 7% of its high-technology firms. In 2006, my research team collaborated with Saxenian to update her work and found that the percentage of immigrant-founded startups had increased to 52.4%, with Indian-born executives having founded 15.5% of Silicon Valley tech firms—though they constituted only 6% of the Valley's working population. We found that 96% of the immigrant entrepreneurs involved in engineering and technology had completed a bachelor's degree, and 74% held master's or Ph.D. degrees. Within that group, Indian founders had been educated in a diverse set of universities; the famed Indian Institutes of Technology, for example, accounted for only 15% of the company founders. Culture, as much as education, is key. There is no doubt that education gave the Indians an advantage. But this does not explain why the boards of companies such as Microsoft, Google, IBM, and Twitter would choose foreign-born technologists over equally qualified Americans. The answer may lie in cultural values, upbringing, and struggles. In a land of more than a billion people, most of whom are hampered by rampant corruption, weak infrastructure, and limited opportunities, it takes a lot to simply survive, let alone to get ahead. Indians learn to be resilient, battle endless obstacles, and make the most of what they have. In India, you learn to work around the problems that an unjust state and society create for you. Entrepreneurship, along with the creativity and resourcefulness required to deal with all the obstacles, is part of life. Indians have many ethnic, racial, gender, and caste biases—as do people all over the world. Yet in order to succeed, they learn to overlook or adapt these biases when necessary. There are six major religions in India, and the Indian constitution recognizes 22 regional languages. Every region in the country has its own customs and character, and people accept differences in attitudes and beliefs, especially in the context of business. Then there is the humility that comes from moving to new lands. Talk to almost any immigrant, regardless of origin, and he or she will share stories about leaving social status behind in their home country and working their way up from the bottom of the ladder in the adopted land. It's a humbling process; you learn many valuable lessons when starting from scratch and working your way to success. These are all traits that any board would recognize—and value—especially when the alternatives are arrogant company founders who believe they are entitled to their jobs. And it's these traits that enable a CEO to transform company culture. This is what I believe has given the Indian CEOs the advantage. Read the full article at the following link: <https://fortune.com/2021/12/03/twitter-ceo-tech-industry-microsoft-google-silicon-valley-indian-born-leaders/>

## Third T of "Tourism" Importance of Tourism for 2 Countries

### Bravo India: The second most populous country received the most awards for sustainable tourism

In Mumbai, the Village Ways Association has been established, which invites guests to walk from village to village with a local guide. Tourists stay in purpose-built accommodation managed by the local community.



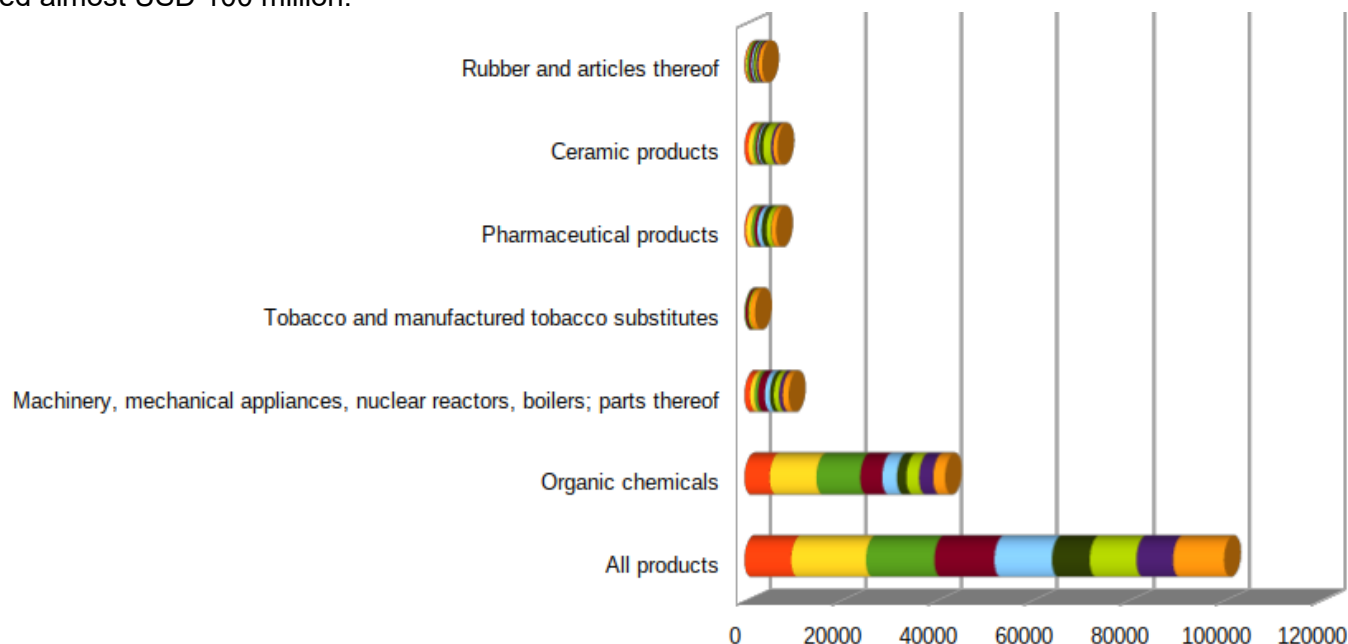
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12/15/2021 16:17

India has been singled out as the leading country for Responsible Tourism at the WTM Responsible Tourism Awards. Launched in 2004, the event recognizes and rewards businesses and destinations which are contributing to a more sustainable tourism industry. Organizers noted that in 2008, the southwestern coastal state of Kerala led the way when it hosted the 2nd International Conference on Responsible Tourism in Destinations. From this, the Responsible Tourism Mission was born and rolled out across Kerala. Its benefits were soon recognized by other states in India. The 2021 Global Award winners were selected from the Best of India and the Rest of the World Awards along with the best entries from Africa and Latin America. Govardhan Village is a 100-acre retreat centre and model farm community in Maharashtra, India. The campus provides residential conferences and study programmes, attracting 50,000 tourists a year. It avoids emissions through solar panels which deliver almost 185,000 units of electricity annually. Cow dung and other wet waste are converted into electricity, while plastic waste is converted into both light diesel oil and electricity. The site also uses Soil Bio-Technology to process sewage into greywater for irrigation, so there is no need to pump water from the river. Buildings on the campus are built from compressed stabilized earth blocks (DSEB) which use less energy, and all materials are sourced from within 100km to reduce carbon emissions from transport.

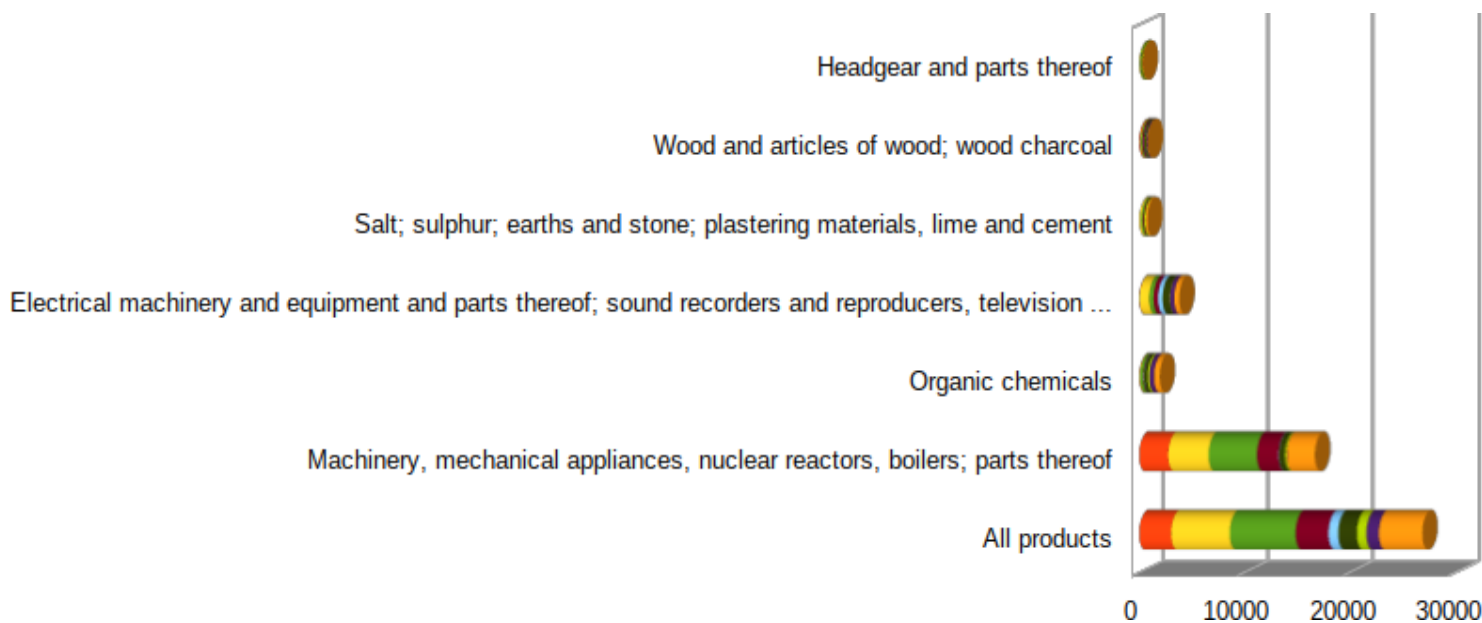


**Fourth T of “Trade” between India & Croatia – Way below the potential when both countries have rebounded back well addressing the challenges of the pandemic**

Commerce and Industry Minister Mr Piyush Goyal said on 14 December that India's merchandise export was set to touch an all-time high of \$400 billion during the current financial year, driven by sharp uptick in shipments. As per a preliminary trade data, India's merchandise exports in April-November 2021 were at \$262.46 billion, an increase of 50.71 per cent over \$174.15 billion in the same period of the previous financial year. Here is a snapshot of Indian exports to Croatia in the first nine months of 2021. The cylindrical bars representing monthly contributions from Jan-Sep. The amount shown are in thousand dollars. The total exports from India to Croatia in nine months of 2021 touched almost USD 100 million.



Presenting the draft budget for 2022 in the national parliament on 1 December, Prime Minister Plenković announced a shift from crisis management to efforts to boost competitiveness and create new jobs. Croatian economy bounced back supported by strong private consumption, the better-than-expected performance of tourism industry and the boom in merchandise exports, that in the first nine months of 2021 amounted to 13.3 billion euros, an annual increase of 24.6 per cent. This made 2021 for Croatian exports, a record year, as the score from 2019 was exceeded by 2 billion euros. Here is a snapshot of Croatian exports to India in the first nine months of 2021. The total exports from Croatia to India in nine months of 2021 touched USD 27 million.





## News on India

**Resilient supply chain. Sydney has started its first fully automated driverless metro trains that had been assembled in Andhra Pradesh, India, between Tallawang and Chatswood stations on the North West Rail Link.** Alstom SA - a French manufacturing company - is responsible for manufacturing the driverless trains. According to local media reports, these trains were assembled at Sri City in Andhra Pradesh. The metro trains are totally automated with automatic LED lighting. At the same time, security features such as an emergency intercom and CCTV cameras have been installed on the locomotives.

**Chipset maker, Intel, is planning to set up its semiconductor manufacturing unit in India.** The US-based chipset giant announcement came in the back drop of recent Union Cabinet's decision on semiconductors that will encourage research and innovation in the sector and also boost manufacturing, strengthening the 'Aatmanirbhar Bharat' programme. The Minister for IT and Electronics, Ashwini Vaishnaw, welcomed Intel to India by tweeting. He wrote, "Intel - welcome to India."

**Kidambi Srikanth wins silver medal at Badminton World Championships.** Shuttler Kidambi Srikanth became the first Indian man to win a silver medal at the BWF World Championships. Singapore's Loh Kean Yew defeated Kidambi in the summit clash 21-15, 22-20. The final lasted for 43 minutes. The former world No. 1 Kidambi Srikanth became the first Indian to win a silver in the men's singles at the badminton world championships, with Prakash Padukone (1983), B Sai Praneeth (2019) and Lakshya Sen (2021) winning a bronze each.

**Prime Minister Shri Narendra Modi visited Goa on 19th December and attended the function marking Goa Liberation Day celebrations at Dr. Shyama Prasad Mukherjee Stadium in Goa.** Prime Minister felicitated the freedom fighters and veterans of 'Operation Vijay' at the function. Goa Liberation Day is celebrated on December 19 every year to mark the success of 'Operation Vijay' undertaken by the Indian Armed Forces that liberated Goa from Portuguese rule. Prime Minister inaugurated multiple development projects including the renovated Fort Aguada Jail Museum, Super Speciality Block at Goa Medical College, New South Goa District Hospital, Aviation Skill Development Center at Mopa Airport and the Gas insulated Substation at Dabolim-Navelim, Margao. He also lay the foundation Stone for India International University of Legal Education and Research of Bar Council of India Trust at Goa.

**Razorpay has raised \$375 million (Rs 2,850 crore) in a new funding round** led by US-based investors TCV, Lone Pine Capital and Alkeon Capital, after which its valuation has grown to \$7.5 billion—a jump of two-and-a-half times in eight months. The Bengaluru-based payments gateway platform had in April this year raised \$160 million at a post-money valuation of \$3 billion. The company has seen a seven-fold increase in its valuation in a little over a year since it turned unicorn.

**Central Drugs Standard Control Organisation has given approval to Corbevax vaccine, Covovax vaccine and anti-viral drug Molnupiravir for restricted use in emergency situations.** In a series of tweets, Union Health Minister Mansukh Mandaviya said, Corbevax vaccine is India's first indigenously developed RBD protein sub-unit vaccine against COVID-19, made by Hyderabad-based firm Biological-E. It is the third vaccine developed in India. The Nanoparticle Vaccine, Covovax, will be manufactured by Pune-based firm Serum Institute of India. Mr. Mandaviya said, Molnupiravir will now be manufactured in the country by 13 companies for restricted use under emergency situation for treatment of adult patients with COVID-19 and who have high risk of progression of the disease. He added that Prime Minister Narendra Modi led the battle against COVID-19 from the front and all these approvals will further strengthen the global fight against the pandemic.



## News on India

### 2021 In Review | Indian startups bag record \$36 billion funds in 2021

With an increased demand for digitalization in the wake of the Covid-19 outbreak, India's startup ecosystem saw a record investment of roughly US\$ 36 billion in privately-held enterprises this year. According to Preqin, a UK-based investment data platform, venture and private equity investments surged thrice throughout the year, from US\$ 11 billion in 2020 to US\$ 31 billion in 2021. The volume of seed-stage deals dominated this year, with roughly 396 deals totaling US\$ 705.86 million, while around 166 series A investments totalled about US\$ 1.67 billion, according to data through December 20. The majority of the funds went to pre-IPO funding rounds in companies like Zomato, Ola, Policybazaar, and Paytm, with the top 10 deals totalling US\$ 5.58 billion, according to Preqin data. Aside from an increase in the number of deals, Indian entrepreneurs raised larger financing rounds this year than in prior years, as risk capital investors stepped up to take bigger bets on high-growth companies early on. As a result, companies have been able to obtain greater valuations, with prices frequently doubling or tripling in subsequent fundraising rounds. "Valuations are a reflection of an investor's exit expectations. 2021 has proven the full venture cycle for India. Some fabulous exits like Zomato, Nykaa, PolicyBazaar and others have increased exit size expectations, and consequently the valuations," said Alok Goyal, founder and investment partner at Stellaris Venture Partners, an early-stage VC firm. Funds such as Tiger Global, Falcon Edge, Sequoia Capital, Accel, and Blume Ventures were the most active investors in 2021. SoftBank, which is known for its huge bets, invested more than US\$ 3 billion in Indian businesses, making it the Japanese investment firm's largest infusion in India in a single year. Unicorns, a term used to describe companies valued at US\$ 1 billion or more, have spawned by hundreds this year. A week in April saw half a dozen entrepreneurs join the unicorn club in a matter of four days, bringing the total number of unicorns to around 40. But it wasn't just unicorns that raised numerous rounds this year; high-growth companies did as well, signaling a strong desire to back the leaders. Cred, Of Business, Groww, and Cars24 are fintech startups whose valuation grew in the last year. Vaibhav Agrawal, a partner at Lightspeed India, which has backed new unicorns of 2021 like ShareChat and Apna Co., stated, "Through 2021 we experienced a strong positive shift in the quality of founding teams, depth of markets, unit economics and exit opportunities via public markets. As a result, investors across stages felt comfortable writing larger cheques and taking more risk." Unicorn founders believe that because there are fewer assets in late-stage funding deals, marquee investors are willing to sweeten the deal. "Founders (must) dilute less, and this cash can come in handy during rainy days," stated a top unicorn entrepreneur who raised funding three times this year. The year tech IPOs became a reality. When Indian entrepreneurs spoke about an initial public offering (IPO), it didn't seem a viable option for a long time, but that changed in 2021. The year was a defining moment in the ability of technology-driven enterprises to access public markets, with the majority of them being rewarded by public investors as well. This year, smaller companies like gaming business Nazara Technologies went public, but it was food delivery service Zomato's Rs 9,000 crores (US\$ 1.19 billion) IPO that truly laid the stage for at least a half-dozen top-leading startups filing for an IPO in India. Zomato's stellar listing this year has caused its founders to reconsider their IPO timeframes and consider it a genuine prospect for 2022 and 2023. Others have raised roughly US\$ 2.5 billion from public market investors, including Policybazaar, Nykaa, and Paytm. [Source: India Times](#)

### Byju's 13th most valued unicorn, first Indian start-up to reach \$21-bn

Byju's, the most valued edtech startup in the world has entered this year's global list of 35 elite unicorns with over US\$ 10 billion valuation. Byju's becomes the first domestic startup to reach a valuation of US\$ 21 billion and ranks 13th largest unicorn in the globe based on a report by CB insights. China and US accounts of 75% of the top 35 start-ups in the world. UK has three while India, Australia, Brazil and Sweden have one each in the list. Oyo rooms and Ola could have entered in the India's US\$ 10bn plus startups list, but second wave of the pandemic hit those expectations. Many other players too dropped off the list like Zomato, Policybazaar.com and Paytm, because they have gone for IPO and are listed in the exchange. [Source.](#)

### Rewinding of First 25 years of Ministry of Electronics and Information Technology

While unveiling the book titled "Rewinding of First 25 years of Ministry of Electronics and Information Technology," Mr. Ajay Prakash Sawhney, Secretary in the Ministry of IT, stated on December 16, 2021 that India has added about 40 unicorns in the previous 50 weeks in the startup world. He also mentioned that India's software exports increased to Rs 5000 billion (USD 70 billion) today compared to Rs 51 crore in 1987, representing a 35% annual growth for the last 30 years. [Source.](#)

### India overtakes UK to come third in unicorn race: Hurun report

According to a new Hurun India study, India has surpassed the UK to occupy 3rd place with 54 unicorns. Bengaluru has more unicorns than cities such as Boston, Palo Alto, Paris, Berlin, and Chicago, with a total of 28 unicorns, the seventh highest in the world. Unlisted companies with a market capitalization of US\$ 1 billion or more are known as unicorns. According to the Hurun research, India now has 54 unicorns, 33 more than in 2020, while the UK has 39 unicorns, 15 more than a year ago. India was the most popular destination for emigrant unicorn creators, followed by China, Israel, and Russia. Indians have launched 65 unicorns outside of India, including Postman, Innovaccer, Icertis, and Moglix. Anas Rahman Junaid, Managing Director and Chief Researcher, Hurun India, said that "Whilst there are a further 65 unicorns founded by Indians abroad, mainly in Silicon Valley, the percentage of homegrown unicorns has increased from one third to 45%, suggesting that the startup ecosystem in India is maturing." [Source.](#)



## Ambassador's Outreaches

Ambassador Srivastava met with Mr. Robert Šveb, DG of HRT and exchanged ideas for new projects in 2022 between India & Croatia in the area of documentaries and content sharing, 2022 being a special year for India & Croatia.



Ambassador Srivastava along with Ms. Kolinda Grabar Kitarović, the 4th President of Croatia and Ambassador of Japan, Ms. Misako Kaji took part at the conference “Croatia and Asia - desires, expectations, potentials and realities in post-pandemic globalism”, at the Zagreb School of Economics and Management - ZSEM. In the discussion were presented opportunities for Croatia in India in 4Ts of Talent, Technology, Tourism & Trade. Croatian Experts & Entrepreneurs shared their unique experiences in Asia & the scale that Asia provides to Croatian companies. Shared values of democracy were also highlighted.



Ambassador Srivastava spoke during the Webinar organized by ICICI Bank for the Business community of India about export opportunities in Croatia. Healthcare, Digital, Renewables, Maritime, and Startups were highlighted during Ambassador's speech.

**Webinar on Export opportunities in Croatia**

Dear Sir/Madam,

At ICICI Bank, we always thrive to keep you updated on the key industry trends. As a part of this endeavour we have organised a series of webinars to help you realise your business potential with expert sessions from various thought leaders in the Industry - brought on one stage by ICICI Bank.

**Webinar Details:**

**SESSION TOPIC:**  
Export opportunities in Croatia

Thursday, December 23, 2021 4:30 PM - 5:30 PM

**Speaker**  
**Raj Kumar Shrivastava**  
Ambassador, Embassy of India, Zagreb, Croatia

**THIS SESSION WILL COVER:**

- ◆ Croatia - Value Proposition and Eco System
- ◆ Business sectors and investment opportunities for Indian companies in Croatia

We encourage you to invite your colleagues and business associates, who can also benefit from this webinar.

For any export import business banking related requirements, get a call back with a missed call on 9205 049 059 or SMS TRADE to 5676766.

Sincerely,  
ICICI Bank Ltd.

Ambassador Srivastava gave an interview at the latest episode of StartUp Rant to host Mr. Miroslav Zerić. Watch the complete interview at following [LINK](#).





## AYUSH Cell Activities

Developing action points for 2022: The **meeting between the Ministry of AYUSH, Government of India / All India Institute of Ayurveda, New Delhi & Kvarner Health Tourism Cluster (KHTC)** offered continuation & future plans based on the MoU which was signed on the 6th Oct. 2021. AIIA & KHTC several joint endeavors for health & wellness tourism & nutrition for health.



The Zagreb based AYUSH Cell's Online Session "Optimal peak performance: Ultimate Diet and Ashtanga Kriyas." was held on 7<sup>th</sup> December with Prof. Krzysztof Stec Ph.D., Jan Dlugosz University Czestochowa, Ambassador Srivastava & Yogacharya Jadranko Miklec

**Optimal Peak Performance:  
Ultimate Diet  
and Ashtanga Kriyas**

07.12.2021. from 16:00-17:15 (CET)  
Zoom Webinar

Prof. Krzysztof Stec Ph.D.  
Jan Dlugosz University  
Czestochowa, Poland

Amb. Raj Kumar Srivastava  
Ambassador of India to Croatia

Jadranko Miklec  
Yogacharya

The Zagreb based AYUSH Cell's Online Session Yoga for Mental Health with support of Isha Foundation combined a powerful set of practices to activate joints, muscles and energy; bringing a sense of health & vitality to the system. Also included is a

guided meditation. Regular practice can strengthen the muscles, lubricate the joints, relieve chronic ailments and bring a sense of health & wellbeing.

**Yoga for  
Health**

14th Dec  
1600 CET

Embassy of India  
in Croatia

The Zagreb based AYUSH Cell's Online Session "Three Dimensions of Material Existence" was held on the 20<sup>th</sup> December with Dr. Vikrant Singh Tomar Exponent of Vedānta, Bhagavad Gita and Yoga, Ambassador Srivastava & Yogacharya Jadranko Miklec.

**Three Dimensions  
of  
Material  
Existence**

20.12.2021. from 16:00-17:00 (CET)  
Zoom Webinar

Dr. Vikrant Singh Tomar  
Exponent of Vedānta,  
Bhagavad Gita and Yoga

Amb. Raj Kumar Srivastava  
Ambassador of India to Croatia

Jadranko Miklec  
Yogacharya

## #AzadiKaAmritMahotsav #AmritMahotsav

### Register for “Suryanamskar: A Precious Gift from Ancient Indian Sages”

Register for “Suryanamskar: A Precious Gift from Ancient Indian Sages” and come together to perform 75 crore Suryanamaskar (Sun Salutation) to promote a healthy lifestyle for all, as a token of gift to our beloved motherland India.

To participate through Individual Registration Form please enter your personal details at the following [link](#).



### 'Azadi Ka Amrit Mahotsav Online Quiz' from 1-31 Jan 2022.

PIOs, NRIs & Croatian Nationals between age of 16 to 35 years as on 01.01.2022 (Born on or after 01 Jan 1987 and on or before 31 Dec 2005) are invited to register to participate in respective categories of 'Azadi Ka Amrit Mahotsav Online Quiz' from 1-31 Jan 2022. Registration is open from 01Dec2021-31Jan2022 in portal <https://akamquiz.in> & the Quiz competition is open from 01-31 Jan2022. Answer questions on wide-ranging topics from culture to geography & the top 3 winners from each category will receive Gold, Silver & Bronze medals. PIOs, NRIs & Croatian Nationals between age of 16 to 35 years as on 01.01.2022 (Born on or after 01 Jan 1987 and on or before 31 Dec 2005) are invited to register to participate in respective categories of 'Azadi Ka Amrit Mahotsav Online Quiz' from 1-31 Jan 2022.

75  
Azadi Ka  
Amrit Mahotsav

Quiz



A Quiz On Everything About India

Open to NRIs, PIOs, OCIs & Foreign Nationals of age 16-35 years as of 1 January 2022

Registration open from 1st December 2021 to 31st January 2022

Online quiz can be played from 1st - 31st January 2022

The top 3 winners from each category will receive Gold, Silver and Bronze medals

[www.akamquiz.in](https://www.akamquiz.in)





## #AzadiKaAmritMahotsav #AmritMahotsav

### Lecture "Srinivasa Ramanujan like a Bridge over the Ocean"

Croatia India Society and Mathematicians from University of Zagreb celebrated 134th birth anniversary of India's Genius Srinivas Ramanujan (1887-1920). This was also the part of #AzadiKaAmritMahotsav with the focus on themes of "unsung heroes" & "VishwaGuru Bharat". While remembering Ramanujan we could also collate information on at least three generations of Indian and Croatia mathematicians who have worked together in past six decades on themes originated by Ramanujan and Harish-Chandra.



#### Srinivasa Ramanujan like a Bridge over the Ocean

#### Srinivasa Ramanujan like a Bridge over the Ocean

 <b>Prof. Tomislav Šikić</b> Uni. of Zagreb, Faculty of Electrical Engineering and Computing	 <b>Welcome speech by Raj Srivastava</b> Ambassador of India to Croatia
 <b>Dipendra Prasad</b> President of Commission for Developing Countries 2018-2022, International Mathematical Union (IMU)	

**18:00 - Welcome Remarks by Ambassador of India to Croatia H.E. Mr. Raj Kumar Srivastava**

**18:10 - 20 minute video about Srinivasa Ramanujan followed by a short trailer "The Man Who Knew Infinity"**

**18:30 - Lecture by Prof. Tomislav Šikić Uni. of Zagreb, Faculty of Electrical Engineering and Computing**

**19:10 - Virtual Address by Professor Dipendra Prasad, former director of the famous TATA Institute of Fundamental Research in Mumbai.**

**19:25 - End of the event**



# Presentation by Prof. Tomislav Sikić, University of Zagreb, projected during the lecture "Srinivasa Ramanujan like a Bridge over the Ocean" India-Croatia connections in the field of Mathematics

Srinivasa Ramanujan  
like a bridge over the ocean

Zagreb, December 15th 2021.



Tomislav Šikić University of Zagreb, FER  
Department of Applied Mathematics



22 December 1887 – 26 April 1920  
134th anniversary of Ramanujan's birth

- New Delhi: The former Prime Minister Manmohan Singh, on
- February 26, 2012, declared December 22 as the
- National Mathematics Day
- to mark the mathematician's birth anniversary. The National Mathematics Day is celebrated across the country with several educational events in schools and colleges.
- Srinivasa Ramanujan, who is also known as the 'man who knew infinity', did not receive any formal education in Mathematics but made important contributions to the field of mathematics. The mathematical genius made in depth analysis in order to solve mathematical problems using new ideas and concepts.



Unit for Representation Theory of Lie Algebras,  
Number Theory, and Related Structures



Prof. Pavle Papić

Prof. Dražen Adamović

last but  
not least



Prof. M. Rau UFL  
Prof. H. Šikić UZG PMF-MO  
Prof. Z. Vondraček UZG PMF-MO

Ramanujan formula for factorial function

Ramanujan's very accurate approximation formula for factorials:

$$n! \approx \sqrt{2\pi n} \left(\frac{n}{e}\right)^n \sqrt{1 + \frac{1}{2n} + \frac{1}{8n^2}}$$

Generalization of this formula and efficient algorithm for calculating coefficients in this expansion were recently studied and obtained.

Burić, Elezović, New asymptotic expansions of the gamma function and improvements of Stirling's type formulas, J. Comput. Anal. Appl., 13, 4 (2011), 785–795.

It holds  $n! \sim \sqrt{2\pi n} \left(\frac{n}{e}\right)^n \left[ \sum_{k=0}^{\infty} P_k n^{-k} \right]^{1/m}$ ,  
where

$$P_0 = 1, \quad P_n = \frac{m}{n} \sum_{k=1}^n \frac{B_{2k}}{2k} P_{n-2k+1}, \quad n \geq 1.$$

$B_k$  are Bernoulli numbers.

work still in progress



Prof. dr. sc.  
Ivan Slapničar  
Sveučilište u  
Splitu /  
University of  
Split  
FESB

Prvi put sam u Indiji bio u siječnju 2013 godine. Sudjelovao sam kao pozvani predavač na "International Conference on Numerical Linear Algebra and its Applications", vidi <https://www.its.ac.in/nlaa2013/conference/>.

Nakon toga sam boravio pet dana na IIT Indore kao gost Prof. Ahmada i održao dva pozvana predavanja.

Moj drugi boravak na IIT Indore bio je 2016 godine. Od 26 lipnja do 5 srpnja 2016 održao sam kurs "Modern Applications of Numerical Linear Algebra Methods" u okviru prestižnog programa GIAN (Global Initiative of Academic Networks) Vlade Republike Indije. Materijali koje sam izradio za taj kurs dostupni su na adresi <https://github.com/ivanslapnicar/GIAN-Applied-NLA-Course>, te se dalje razvijaju i koriste u nastavi.

Godine 2016 bio sam član povjerenstva za izbor dr. sc. Ahmada u zvanje izvanrednog profesora.

Tijekom svog boravka kao poslijedoktorand na Sveučilištu u Osijeku, dr. sc. Istikhar Ali, bivši doktorand Prof. Ahmada, bio je u lipnju 2019. godine moj gost na Sveučilištu u Splitu te je u okviru Znanstvenog kolokvija Splitskog matematičkog društva održao predavanje "Location for the eigenvalues of quaternionic matrices and its applications".

Godine 2021. objavljen je zajednički rad: Sk. Safique Ahmad, Istikhar Ali, and Ivan Slapničar, Perturbation analysis of matrices over a quaternion division algebra, Electronic Transaction on Numerical Analysis, Volume 54, pp. 128-149, 2021, <https://etna.math.kent.edu/volumes/2021-2030/vol54/abstract.php?vol=54&pages=128-149>

Murali Rao

MathSciNet

Ph.D. University of Mumbai 1963

Dissertation: Increasing Markov Processes

Zoran Vondraček

Ph.D. University of Florida 1996

Dissertation: Special classes of Excessive Functions Satisfying Harnack's Principle

Advisor: Murali Rao

Students: Click [here](#) to see the students listed by family name.

Name	School	Year	Descendants
Huzar, Milanka	University of Zagreb	1997	3
Mirica, Ante	University of Zagreb	2009	
Štencić, Marko, Tamaš	University of Zagreb	2010	
Daničić, Jelena	University of Zagreb	2012	
Čadež, Tadej, Ivana	University of Zagreb	2014	
Vandarić, Jovana	University of Zagreb	2016	
Šušter, Zoran	University of Zagreb	2019	

Ph.D. University of Florida 1993

Dissertation: Superprocesses

Hrvoje Sikić

Ph.D. University of Florida 1993

Dissertation: Superprocesses

Advisor: Murali Rao

Students: Click [here](#) to see the students listed in chronological order.

Name	School	Year	Descendants
Čadež, Tadej	University of Zagreb	2010	
Čadež, Milanka	University of Zagreb	1997	3
Čadež, Jovana	University of Zagreb	2016	
Šušter, Zoran	University of Zagreb	2019	

## 552 birth anniversary of Guru Nanak Dev Ji & the 400 birth anniversary of Guru Tegh Bahadur Ji

Croatian Indian Society, in cooperation with India in Croatia (Embassy of India, Zagreb), celebrated the 552 birth anniversary of Guru Nanak Dev Ji and the 400 birth anniversary of Guru Tegh Bahadur Ji at Napredak Cultural Centre, Zagreb on 1/12/21. The programme started with a video message of the Hon'ble Prime Minister of India, followed by Ambassador's remarks and playing of Shabad Kirtan Songs.



## From Ambassador's Desk



Dear Friends,

When we started this new initiative of the “ in  Newsletter (Novosti iz Indije)” from our Embassy in Zagreb, Croatia in January 2021, I wrote in a letter to our readers that we would like India-Croatia partnership to be multi-stakeholder partnership and we believe that the complementarities between the two countries would strengthen the relationship further. The last edition of the Newsletter in 2021 covers clearly our complementarities in 4Ts of Technology, Talent, Tourism and Trade, which would remain our focus in coming years as well. With the year 2021 behind us, we are happy that with continuous support from friends of India in Croatia, we have been able to reach many new milestones in our bilateral relationship in this challenging pandemic ridden year. The 12 monthly editions of our newsletter provide a good summary of what we could achieve together. Whether it was the first ever visit of Indian External Affairs Minister to Croatia, or the first ever International Yoga and Ayurveda Conference in Zagreb (with participation of 40 experts not only from India and Croatia but also from neighboring European countries), or the establishment of India-Croatia Startup Bridge, all could happen because of the potential that exists between our two countries and the increasing interest between the two sides to harness that potential.

As we move into the important year 2022 for the two countries, being the 75<sup>th</sup> anniversary of Indian independence and the 30<sup>th</sup> anniversary of Croatian independence, we would see many initiatives from the two sides to make our relationship more visible, more content-rich and more people-focused. We have multiple events planned to celebrate “Azadi Ka Amrit Mahotsav” (the celebration of the 75<sup>th</sup> anniversary of India’s independence) in Croatia which would bring different aspects of India’s culture, tradition, philosophy, technology and talent from India to Croatia. Our new modified Newsletter in 2022 would carry those ideas & stories to our readers again.

I take this opportunity to wish all our readers and their dear ones a very happy, healthy, prosperous and peaceful 2022.

(Raj Kumar Srivastava)

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*Compiled by*

Ivan DeliĆ, Pr, Information Assistant and Sara VargoniĆ, Cultural Assistant at Embassy of India, Zagreb

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Embassy of India  
Veleposlanstvo Indije

