EIPC SPEeDNEWS

The Weekly On-Line Newsletter

Issue 14 – May 2022

NEWS FROM THE EIPC

EIPC Summer Conference Örebro, Sweden
June 14 & 15, 2022

At last! Enfin! Endlich! Alltid sist!

It's difficult to convey the pleasure that it give us to bring news of our Summer Conference, which will be held on Tuesday and Wednesday 14th & 15th June 2022 in Örebro, Sweden. To have our friends and colleagues back together again after all this time is matter of deep joy. A real event with real people, not surreal ones!

Not only are we going to have a stellar cast of speakers, but we will be making a visit to Ericsson R&D in Kumla, and there will be a Conference Dinner at a magnificent restaurant in Örebro itself.

Getting to Örebro will be worth the journey; it is a beautiful city in a beautiful country, and instead of battling with crowded autobahns one will be able to relax on a luxury train as it winds its way through the glorious countryside. Full details on travel itineraries from airports to Örebro are available.

Once there, we will be staying at the Örebro Scandic Grand Hotel, in which our conference will be held, with presentations from Ericsson, the European Space Agency, Isola, Nan Ya, and many other known companies, and a look at additive digital processes in electronics manufacturing amongst 16 papers being delivered.

There will be some new faces amongst the familiar ones, and all of them will be most welcome. We look forward to seeing you amongst them, and so please register your place asap at www.eipc.org

Conference location:
Scandic Grand Örebro
Fabriksgatan 21-23
Örebro, Sweden
T: +46 19 7674300
www.scandichotels.com/hotels/sweden/orebro

Please book your hotel room via the website Scandic Grand Örebro | Hotel in Orebro | Scandic Hotels or via phone Tel: 0046-851751700. Please use the booking code BEIP130622 for both website and call center. The blocked rooms for EIPC will be released on the 13th May, request after that is subject to availability and daily rate.

Conference Programme Day 1, Tuesday June 14

08:00-08:30	Conference Registration and Table Top & Poster Exhibition build up	Table Top & Poster Display Area
08:30-09:00	Welcome by the EIPC President	Alun Morgan, EIPC, UK
Keynote Session 1: Market Outlook & New Business Opportunities		**Moderator: Tarja Rapala-Virtanen, EIPC, FI**
09:00-09:40	Business Outlook: Global Electronics Industry	Alun Morgan obo Custer Consulting, USA
09:40-10:20	The Challenges of the 2022 PCB Market	Dr. Shiuh-Kao Chiang, Prismark, USA
10:20-10:30	Panel discussion	
Session 2: Technology Roadmap and Technical Requirments		**Moderator: Alun Morgan, EIPC President, UK**
10:30-10:50	Setting the trends and requirements for 6G PCB manufacturing	Stig Källman, Ericsson, SE
10:50-11:10	Shift-left makes your PCB design right!	Robrecht Belis, Elsyca, BE
11:10-11:40	**30 minutes Coffee break**	**Table Top & Poster Display Area**
11:40-12:00	The European Space Agency's approach to microvia reliability	Stan Heltzel, ESA European Space Agency, NL
12:00-12:20	Stop resistance from clouding your high speed measurements	Martyn Gaudion, Polar Instruments, UK
12:20-12:35	Panel discussion	
12:35-13:30	**Network Lunch**	**Hotel restaurant**
Session 3: Material Technology for Next Generation Products		**Moderator: Emma Hudson, Emma Hudson Technical Consultancy, UK**
13:30-13:50	Comparative Testing of Insertion Loss Performance on Printed Circuit Boards	Alexander Ippich, Isola, DE
13:50-14:10	Enablers for mmWave PCBs: Base Materials with High Electrical and Mechanical Reliability	Dr. Manfred Huschka, AGC, JP
14:10-14:30	Laminates for high-tech requirements: the example of 5G	Andreas Folge, NanYa, DE
14:30-14:50	The New High RC Construction to Improve PCB Insertion Loss	Alan Cochrane, ITEQ, IT
14:50-15:00	Panel discussion	
15:00-15:10	Info & Logistics Plant visit Ericsson	Christer Nykom, Ericsson, SE
16:00-19:00	**Departure & Visit Ericsson Kumla**	
19:30	**Network Dinner Restaurant Frimis Salonger Örebro**	
22:30	**Return Hotel Scandic Grande Örebro**	

Conference Programme Day 2, Wednesday June 15

Session 4: New Process Technologies		**Moderator: Martyn Gaudion, Polar Instruments, UK**
09:00-09:20	Additive, digital processes in electronics manufacturing (New Process & Equipment	Dr. Kai J. Keller, Notion Systems, DE
09:20-09:40	Novel Ni-free surface finish for next generation PCB technologies	Dr. Kunal Shah, LiloTree, USA
09:40-10:00	ALD thin film as barrier on PCB and PCBA assemblies	Marko Pudas, Picosun, FI
10:00-10:15	Panel discussion	
10:15-10:45	**30 minutes Coffee break**	**Table Top & Poster Display Area**
Session 5: Manufacturing Technologies		**Moderator: Stig Källman, Ericsson, SE**
10:45-11:05	New material (Film) which could be used a bonding film for Teflon Multilayer	Helmut Kroener, Showa Denko Materials, DE
11:05-11:25	Towards the next generation of ultra-flat ED-copper foils for high speed digital & radio frequency applications	Sébastien Depaifve, Circuit Foil, BE
11:25-11:45	Dry Phase Patterning (DPP) – a new technology to disrupt flexible circuit board manufacturing	Tommy Höglund, DP Patterning, SE
11:45-12:00	Panel discussion	
12:00-12:05	**President closing remarks - End of Conference Day 2**	
12:05-13:30	**Network Lunch**	**Hotel restaurant**

The EIPC is not responsible for the content and the presentation of the technical papers, which rests with the presenters. Changes in the programme may occur, due to circumstances, for which the EIPC may not be held responsible.

Travel to Örebro, Sweden

Nearest Airports

There are two major airports in the area;

Stockholm Arlanda Airport (swedavia.com)

Stockholm Skavsta Flygplats - Nyköping

There is a small airport in Örebro with mainly charter services to a few destinations in Europe, check the timetable on the Airport website, from the Airport take a taxi to the Conference venue; The Scandic Grand Örebro.

Travel from Stockholm Arlanda Airport, by Train:

You can travel From Arlanda Airport Central Station with SJ Trains to Orebro Central Station in 2 hours and 40 minutes. Tickets can be booked online. The costs for a return from Arlanda Central Station to Örebro Central Station will be around €100

Book tickets: https://www.sj.se/en/home.html#/

Travel from Stockholm Arlanda Airport, by Car:

The trip to Örebro takes about 2 hours and 15 minutes. You can book a car via Cheap Car Hire, Compare Rental Prices - Rentalcars.com. There are indoor and outdoor parking spaces at the Scandic Grand Hotel available, costs SEK 150/ €15 per night.

Travel from Stockholm Arlanda Airport, by Bus:

Nettbuss/ Bus4You operates daily about 16-18 times from Arlanda airport (Arlanda Flygplats) to Örebro Travel Centre (Resecentre), each direction. The journey takes about 2 hours 40 minutes. Tickets can be booked on Nettbus (www.bus4you.se) and via + 46771-151515.
Costs for a round trip will be around €75. Tickets must always be purchased prior to departure.

Note: on 21/4 timetable was only up till 12 June 2022 – Check when open for bookings after 12 /6

Travel from Stockholm Skavsta Airport (Nyköping) to Örebro, by car:

The best way to travel from Skavsta Airport to Örebro is by rental car and takes about two hours. Book via Cheap Car Hire, Compare Rental Prices - Rentalcars.com. There are no direct busses to Örebro from the airport. Train journeys will take between 3-4,5 hours.

The European Institute for the PCB Community

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NEWS FROM ISRAEL

Eltek Reports 2022 First Quarter Financial Results

Revenues of $9.8 million in the first quarter of 2022 compared to $7.2 million in the first quarter of 2021
Gross profit of $2.0 million in the first quarter of 2022 compared to $1.1 million in the first quarter of 2021
Profit before income tax of $0.8 million in the first quarter of 2022 compared to $0.2 million in the first quarter of 2021
Net profit of $0.6 million in the first quarter of 2022 compared to net profit of $0.2 million in the first quarter of 2021
Net cash provided by operating activities of $0.3 million during the first quarter of 2022
Cash and cash equivalents as of March 31, 2022 were $9.1 million

Eltek Ltd. (NASDAQ: ELTK), a global manufacturer and supplier of technologically advanced solutions in the field of printed circuit boards (PCBs), has announced its financial results for the quarter ended March 31, 2022.

"The world's exit from the Covid-19 crisis, the increased demand for defence products and the continuation of the trend of shifting back high end PCB production to Western countries continue to have a positive impact on our Company's results of operations. The Company's backlog as of March 31, 2022 increased by 50% compared to the beginning of the year. Eltek is a key supplier to several major defence contractors and its revenues and backlog are influenced directly from the increased demand of their customers", said Eli Yaffe, Chief Executive Officer of Eltek. "During the first quarter of 2022, we began our accelerated investment program at the Company's plant in Petach Tikva in order to cope with the increase in demand we forecast and the need for higher efficiency. The first phase of the plan includes investments in production lines and infrastructure amounting to $9 million. The total cost of our accelerated investment plan is expected to be $15 million. We are also continuing our efforts to increase our skilled workforce in order to expand our production capacity", concluded Mr. Yaffe.

Highlights of the First Quarter of 2022 compared to the First Quarter of 2021

Revenues were $9.8 million in the first quarter of 2022 compared to revenues of $7.2 million in the first quarter of 2021;

Gross profit was $2.0 million (20.1% of revenues) in the first quarter of 2022 compared to $1.1 (15.9% of revenues) in the first quarter of 2021;
Operating profit was $0.7 million in the first quarter of 2022 compared to operating profit of $0.1 million in the first quarter of 2021;
Profit before income tax was $0.8 million in the first quarter of 2022 compared to $0.2 million in the first quarter of 2021;
Net profit was $0.6 million or $0.11 per fully diluted share for the first quarter of 2022 compared to net profit of $0.2 million or $0.04 per fully diluted share in the first quarter of 2021;
EBITDA was a $1.1 million (11% of revenues) in the first quarter of 2022 compared to EBITDA of $0.6 million (8% of revenues) in the first quarter of 2021;
Net cash provided by operating activities amounted to $0.3 million in the first quarter of 2022 compared to net cash provided by operating activities of $2.5 million in the first quarter of 2021;
Cash and cash equivalents as of March 31, 2022 were $9.1 million compared to $9.3 million as of December 31, 2021.

Conference Call

A replay of the call will be available for 30 days on the Investor Info section on Eltek's corporate website at http://www.nisteceltek.com approximately 24 hours after the conference call is completed.

About Eltek

Eltek – "Innovation Across the Board", is a global manufacturer and supplier of technologically advanced solutions in the field of printed circuit boards (PCBs), and is the Israeli leader in this industry. PCBs are the core circuitry of most electronic devices. Eltek specializes in the manufacture and supply of complex and high quality PCBs, HDI, multilayered and flex-rigid boards for the high-end market. Eltek is ITAR compliant and has AS-9100 and NADCAP Electronics certifications. Its customers include leading companies in the defence, aerospace and medical industries in Israel, the United States, Europe and Asia.
Eltek was founded in 1970. The Company's headquarters, R&D, production and marketing centre are located in Israel. Eltek also operates through its subsidiary in North America and by agents and distributors in Europe, India, South Africa and South America.

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NEWS FROM THE UK

Ventec to host live Webinar on Thermal Management with IMS

Ventec International Group Co., Ltd. (6672 TT) is pleased to announce that it will be hosting a live webinar on 'Top design techniques for thermal management with IMS' on Thursday, 23rd June at 3 pm CET / 9 am EST. Presented by IMS technology expert Robert Art, the webinar is geared towards helping PCB Designers, OEMs and PCB Manufacturers optimize the thermal performance, reliability, and quality of their designs with high performance IMS materials.

Insulated metal substrate (IMS) technology provides an elegant and economical solution for managing component temperatures in electronic applications such as computing, lighting, and power supplies for a wide range of markets and environments. Identifying a suitable IMS to maintain components at a desired operating temperature enables engineers to design products that enjoy several advantages in the marketplace:

- superior reliability
- smaller size
- attractive appearance
- competitive price

Ventec's free webinar on thermal management with IMS will review popular applications, provide top tips and best practices on IMS material selection and the options that are available to help designers and engineers overcome thermal-management challenges and achieve the thermal performance needed to achieve their targets.

Date: Thursday, 23rd June 2022
Time: 3 pm (CET) / 9 am (EST)
To register:
https://attendee.gotowebinar.com/register/8710168810145570832?source=PR

Ventec International Group Co., Ltd. (6672 TT) is a world leader in the production of polyimide & high reliability epoxy laminates and prepregs and specialist provider of thermal management and IMS solutions. Further information about Ventec's solutions and the company's wide variety of products is available at www.venteclaminates.com and/or by downloading the Ventec APP.

Power Electronics Packaging -
Training and Upskilling (PEPTUS Project)

Design, testing and reliability aspects of power electronics packaging. Thursday 16 June 2022 – At CSA catapult, Newport, South Wales

This Power Electronics Packaging Training Workshop on Design, Testing and Reliability will answer the following key questions and there will be the opportunity to ask many more:

•What are typical qualification procedures?

•What are the sustainability issues for power electronics?

•How do you minimise warpage in multi-chip modules?

•What are the main failure modes?

•What is Heterogeneous Integration?

Who Should Attend

•Engineers and Technicians involved in Power Electronics Design, Manufacture and Test

•Undergraduates and Post-graduates interested in Power Electronics Research and Development

•Engineers and Technicians seeking to become involved in Driving the Electric Revolution

•QC/Reliability Personnel and Managers wanting to gain an appreciation of power electronics assembly processes

Registration for the Training Workshop is open, see below:

•IMAPS Members: £100 – Ticket PEPTUS1-01

•Non-Member: £160 – Ticket PEPTUS1-02

•Students (Undergraduates and Postgraduates): £50 – Ticket PEPTUS1-03

For any other details or information Please contact:
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Innovative, Eco-Smart Tech Pioneers, myenergi,Select Aegis' FactoryLogix MES to Meet Rapid, Sustainable Growth Expectations

Aegis Software, a global provider of Manufacturing Operations Management Software(MOM/MES),announces that myenergi Ltd. has selected the FactoryLogix MES platform for their innovations complex manufacturing facility, located at the Humber Freeport epicenter of green technology in the UK.

Myenergi's product innovation is driven by the rapidly evolving need to efficiently utilize domestically generated green energy, for uses that include the charging of electric vehicles, effectively without cost.

"We are seeing extraordinary growth of demand in this new industry, with expectations of perfect quality, which presents an immense positive challenge, that we see best addressed through Digital Transformation of our manufacturing practices as we accelerate growth in manufacturing capacity," states Lee Robinson, Production Director at myenergi, who continues, "Aegis' paperless engineering tools and IIoT-based MES platform provide us with exactly the right tools that we need to take the vision for our business to the next level."

Utilizing the full FactoryLogix platform, including Digital Manufacturing Engineering for the creation of electronic work-instructions, a fully IIoT-connected manufacturing floor, Lean Material Logistics Management, Advanced Quality Management and Adaptive Planning, myenergi is ready to meet market opportunities,driven by recent energy cost increases for consumers, who expect simple to use, out-of-the-box solutions that manage their domestic energy generation, especially for use with their electric vehicles.

"myenergi are an inspiring example, where the combination of local technology innovation, recognition of immediate market opportunity, and

creation of excellence of on-shore UK-based manufacturing, brings the agility and control needed to introduce and successfully scale their business," states Daniel Walls, Managing Director EMEAat Aegis Software, who adds, "We are proud to be a part of myenergi's success story, as it continues to unfold."

FactoryLogix is a holistic and modular IIoT-based Manufacturing Operations Management platform that delivers leading-edge technology with easily configurable modules to support and execute a discrete manufacturer's strategy towards Industry 4.0. FactoryLogix manages the entire manufacturing lifecycle: from product launch to material logistics, through manufacturing execution and quality management, to powerful analytics and real-time dashboards. This end-to-end platform helps companies accelerate product introductions, streamline processes, improve quality and traceability, reduce costs, and gain greater visibility for competitive advantage and profitability

About myenergi

myenergi are at the forefront of British renewable eco-smart technology innovation and manufacturing. Their brand new innovations complex is at the heart of the Humber Freeport, the epicentre of green technology in the UK. myenergi's renowned zappi product was the world's first solar and wind compatible electric car charger, well and truly putting British manufacturing back on the world stage.

To learn more visit https://myenergi.com/

About Aegis Software

Founded in 1997, Aegis Software uniquely delivers a comprehensive and flexible end-to-end manufacturing execution system (MES) platform giving manufacturers the speed, control, and visibility they require. Aegis has international sales and support offices in Germany, UK, and China, and partners with more than 37 manufacturing equipment suppliers. Since its inception, Aegis has been helping more than 2,200 factories across the military, aerospace, electronics, medical, and automotive industries, drive rapid and continuous innovation with the highest quality while reducing operational costs. Learn more by visiting https://www.aiscorp.com. Speed, Control and Visibility for Manufacturing.

Note: FactoryLogix is a registered trademark of Aegis Industrial Software. All other company and product names contained herein are trademarks of the respective holders.

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ELECTRONIC INDUSTRY NEWS

How Manufacturers Can Adapt to the New Normal

EPS NEWS

Research confirms time and again that adaptability is the key differentiator between entities that thrive amid systemic change, transformation and uncertainty and those that don't.

The technology industry — including electronics manufacturers and supply-chain operators — has had a lot on its plate over the last few years:

- Labour disruptions from a pandemic and waves of resignations
- More credible competition from an expanding global marketplace
- Expansion of consumer protection laws and regulations concerning connected technologies
- The breakneck pace of technological innovation, requiring swift times to market and quick pivots to capture excitement over emerging product types
- Uncertain current and future supplies of raw materials associated with LCD screens, batteries, chips and semiconductors
- Ongoing chip shortages meant $210 billion in losses for the automotive industry. Meanwhile, four-fifths of the chip and semiconductor sector is struggling to ramp up hiring qualified team members.
- The "Great Resignation" — an attempt at rewriting the social contract — has met up with spiralling population growth and the rapidly expanding demand for technology products. The nexus of these influences has caught many manufacturers flat-footed.

There are expectations from the public to continuously innovate and expand product lines, as well as pressures from regulators, supply and demand, global competition, and political or social events. As a result, electronics manufacturers need to be more adaptable and cleverer than ever about change.

The road to adaptability

Bringing fresh thinking to product and services design, logistics techniques and enterprise management will help manufacturers and supply chain companies throughout the tech industry navigate uncertain waters.

Here's a look at how modern electronics entities are better preparing their processes, products and infrastructure for a changing world.

1. **Deploy automation technologies**

The electronics sector is an ideal fit for automation. Manufacturing professionals are recommending against using traditional ROI models in the decision-making process and thinking instead of the benefits across a longer period.

Automation is a short- and long-term solution for electronics manufacturers concerning labour-supply fluctuations and rising costs. It's also a way to wring as much utility out of physical assets, like warehouses, as possible. A facility built for automation might have up to 400% more storage capacity than one designed for foot traffic. The prospect of not spending more than strictly necessary on real estate or storage space is an attractive one in these times.

2. **Rethink just-in-time logistics**

Electronics manufacturers and their supply chain partners pushed hard for years to make the entire logistics process leaner and faster. Just-in-time fulfillment was the order of the day, and it saw every entity in the supply chain keeping raw-material, component and finished-product inventories as slim as possible to eliminate waste.

The pressures of the last few years are bringing a departure from just-in-time logistics in favour of something more accurately termed "just-in-case" logistics. Stocking excess parts and inventory won't solve manufacturing's ongoing challenges, but it can help shield companies from some of the volatilities of the outside world. So will finding more reliable vendors with track records for timely deliveries and stock availability.

3. **Prioritize orders and buy in bulk**

Electronics manufacturing service companies that want to stand a chance of keeping supplies of critical products stable should work with customers to revisit their ordering habits and schedules.

Manufacturers should request that people flag only the orders they truly need as priorities and place larger orders less frequently. These measures create more realistic expectations and consistent results for all involved and a more efficient fulfillment experience throughout the sector.

4. **Turn to lower-tech models**

For several years, consumers have pushed for more complex, sophisticated, digitally connected, feature-heavy products. Now, with raw-material and supply-chain situations

being what they are, manufacturers and consumers of electronics are contemplating a return to more basic, lower-tech models.

Consumer technology operates in cycles. The general concept can be a matter of practicality as well as taste. Having fewer embedded circuits in the family van and eschewing internet connectivity in the coffee maker will conserve resources and manufacturing capacity without significantly compromising the customer experience.

5. **Revise payment windows**

Clinging to outdated or insufficient payment terms may be holding manufacturers back from being as adaptable as they want to be.

It used to be the industry norm to employ 90-day payment windows. However, with current challenges and companies needing a high velocity of money to keep their doors open, locking in shorter payment windows can remove some pressure. This grants electronics entities greater liquidity, flexibility and adaptability.

6. **Reshore as much as possible**

The largest manufacturers in electronics, including Samsung and Intel, are committing billions of dollars to reshore semiconductor plants and other facilities to domestic soil. The timing makes it an undeniable reaction to trade wars and global pandemics. However, smaller companies specializing in chips, circuits and semiconductors have been moving back stateside for some time, and many never left.

The Reshoring Initiative started in 2010 and has facilitated efforts for hundreds of companies since then. One needn't have a billion-dollar war chest or a presidential shoutout to get it done.

Domestic sourcing gives clients of electronics manufacturing services considerably more agility than they'd have while sourcing parts from overseas. Eliminating expenses during

shipping — not the least of which are lost time from transit and lost money from tariffs — is a welcome opportunity.

Meanwhile, the cost of freight is rising steadily. Addressing these variables through reshoring allows manufacturers to operate leaner, quicker and with the ability to adapt to emerging conditions.

Find the opportunities to become more adaptable
There are many other opportunities for electronics manufacturers to change how they operate in the name of adaptability. This determines success in the dynamic and challenging tech space. New partnerships, modes of thinking and supportive technologies can make the difference.

Some factories might leave China, but in the grand scheme of things it doesn't matter much

Evelyn Cheng@CHENGEVELYN - CNBC

KEY POINTS

- China's tight Covid controls have reignited conversations about moving supply chains out of the country.
- "From China's perspective, the movement out of local manufacturing is not going to be significant enough to really alter the nature of China's role in the overall supply chain," Vishrut Rana, Singapore-based economist at S&P Global Ratings, said in a phone interview.
- For the first four months of the year, foreign direct investment into China rose by 26.1% year-on-year to $74.47 billion, China's Ministry of Commerce said, with that from the U.S. up by more than 50%.

BEIJING — China still holds the cards for global supply chains, whether or not Covid lockdowns frustrate businesses in the near term.

Companies and analysts have discussed moving factories out of China for years, especially since labour costs have climbed and U.S.-China trade tensions worsened.

The pandemic has reignited those conversations. Foreign businesses talk about how executives can easily travel to Southeast Asia factories, but not China. Some point to surging exports from Vietnam as an indicator that supply chains are leaving China.

"Supply chain diversification is quite tricky because people always talk about it, and boardrooms love to discuss it, but often at the end of the day people find it's difficult to implement," said Nick Marro, global trade leader at The Economist Intelligence Unit.

When businesses had those discussions in 2020, it turned out that "China was able to remain open, while Malaysia, Vietnam were going offline," Marro said. "Really, the critical factor right now is how China plans on maintaining these [Covid] controls as the rest of the world opens up."

By the numbers, China's exports rose by 3.9% in April from a year earlier, the slowest pace since a 0.18% increase in June 2020, according to official data accessed through Wind Information.

Vietnam in contrast saw exports jump by 30.4% in April from a year ago, following a nearly 19.1% year-on-year increase in March, Wind showed.

The level of manufacturing interest in Vietnam is "very significant," Vishrut Rana, Singapore-based economist at S&P Global Ratings, said in a phone interview. "Vietnam has emerged as a very key supply chain node for consumer electronics."

But Vietnam's exports totalled $33.26 billion in April or about one-eighth of China's $273.62 billion in global exports that month, according to Wind.

"From China's perspective, the movement out of local manufacturing is not going to be significant enough to really alter the nature of China's role in the overall supply chain," Rana said. "China still remains at the very centre of the electronics network in APAC."

For the first four months of the year, foreign direct investment into China rose by 26.1% year-on-year to $74.47 billion, China's Ministry of Commerce said Thursday. During that time, investment from Germany jumped by 80.4%, while that from the U.S. rose by 53.2%.

In contrast, Vietnam saw a 56% year-on-year drop in foreign direct investment to $3.7 billion in the first four months of the year, Wind data showed. Foreign direct investment from the U.S. fell by 14%.

"It is very difficult to match the scale and scope of China's supply chains outside China at the moment," Rana said. Only supply chains for very specific products — like semiconductors or electric vehicle parts —might be moving to Vietnam, Malaysia or other countries, he added.

China's supply chain dominance, built up over the years, is also supporting new business models.

One of the better known is Shein. Backed by funds such as Sequoia Capital China, the company has combined big data analytics and its supply chain network in China to become an international e-commerce giant in low-cost fast fashion.

"China's supply chain advantage is not just based on labour cost," James Liang, managing partner at Skyline Ventures, said in Mandarin translated by CNBC.

According to his analysis, at least 20% of the cost of goods sold by apparel and furniture producers goes into labour costs, versus just 5% for electronics producers.

China's advantage is the benefit of having supply chain hubs, which in Liang's view pave the way for businesses to boost efficiency by integrating all their suppliers onto one digital system.

He said his firm invested $5 million in October into a furniture company called Povison, which is trying to replicate Shein's model for clothing. Additional investment plans have been delayed due to Covid-related travel restrictions, he said.

'A story of hesitation'

The latest Covid lockdowns have also slowed the ability of trucks to transport goods throughout China, while keeping many factories in the Shanghai region at limited or no production for weeks. That's on top of Beijing's policy since 2020 requiring two- or three-week quarantine upon arrival in China — if the traveller can book one of the few flights in.

Shifting operations out of China is difficult, but "what our survey is indicating is there will be less investment into China and more investment into Southeast Asia," Joerg Wuttke, president of the EU Chamber of Commerce in China, said during a webinar.

He noted how it is now far easier to fly executives to Singapore or other countries in the region, than to China.

As a result of the latest Covid controls, nearly a quarter of 372 respondents to the EU Chamber of Commerce in China's survey in late April said they were considering shifting current or planned investments to other markets.

But 77% said they didn't have such plans. A survey of U.S. businesses in China found similar trends.

Those survey results indicate that "companies don't want to quit the market, but they don't know what to do," said the EIU's Marro. "Right now it's more a story of hesitation."

"Foreign companies are going to be upset about these [zero-Covid] policies, but at the end of the day there's not many companies that are going to jeopardize their position in a decades-long market based on a temporary shock," he said.

Even companies like Starbucks, which suspended guidance due to Covid unpredictability, said it still expects its China business will become bigger than the U.S. in the long term.

Many analysts expect China may begin to relax its zero-Covid policy after a political reshuffle in the fall.

When asked about the EU Chamber's survey findings, China's Ministry of Commerce only noted the global impact of the pandemic to supply chains. The ministry also said China would improve its foreign investment services and increase opportunities for foreign businesses.

"Reconfiguring supply chains is not as easy as flipping a light switch on and off," said Stephen Olson, senior research fellow at the Hinrich Foundation.

"Of course, the chessboard would be reconfigured if lockdowns drag on indefinitely," he said. "In that case, pressure will build on companies to consider shifting supply patterns, and the economic and commercial implications of doing so will look a lot more favourable."

Correction: This article has been updated to correctly reflect that analysis by James Liang showed that apparel and furniture producers spend at least 20% of the cost of goods sold on labour costs, versus just 5% for electronics producers.

News from
WECC members

WECC
World Electronic Circuits Council

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NEWS FROM THE IPC

IPC and ITI to Host Virtual Conference on Critical and Emerging Environmental Product Requirements

BANNOCKBURN, Ill., USA, May10, 2022—IPCand the Information will host a virtual conference, "Critical" on June 7 from 11:00 am to 3:30 pm EDT. The event will explore the latest environmental requirements that impact product design, manufacturing, supply chain management, and technology innovation.

Speakers include leading environmental regulatory experts Liz Moorman from the U.K. Department for Environment, Food and Rural Affairs (DEFRA); Peter Alcock from the U.K. Department for Business, Energy & Industrial Strategy (BEIS); Ana Corado and Tala Henry from the U.S. Environmental Protection Agency (EPA); and Kevin Wolfe from Intel.

Alcock and Moorman will cover U.K.Restriction of Hazardous Substances (RoHS) regulations. Corado will present on Toxic Substances Control Act (TSCA) risk evaluations and risk management. Henry will cover EPA's actions to address to per- and polyfluoroalkyl substances (PFAS) and Wolfe will discuss industry collaboration on PFAS.

"Existing chemical and product requirements are evolving and, in addition, we see newly emerging requirements. Combined, these make it difficult to stay ahead of what is needed in terms of compliance," said Kelly Scanlon, IPC director of environmental policy and research.

“Misunderstanding these ever-changing requirements could have a disastrous impact for business. ITI and IPC’s virtual conference will provide the information compliance professionals and officers need to be up to date with legal, regulatory, and customer requirements.”

“Environmental compliance regulations across the globe continue to evolve,” said Chris Cleet, ITI vice president of policy, environment and sustainability. “This conference will give companies a unique opportunity to hear directly from government officials and experts about the current policy landscape and provide critical information and resources compliance professionals need to effectively navigate new regulations and stay ahead of future changes.”

The event is sponsored by The Compliance Map, Orbis Compliance, GreenSoft Technology, Inc., Source Intelligence, and S&P Global Engineering Solutions.

For detailed information on the agenda, speakers or to register for the “ITI and IPC Conference on Critical and Emerging Environmental Product Requirements,” visitwww.ipc.org/event/critical-environmental-requirements-electronics-conference-2022.

IPC Honours Standards A-Team Volunteers at Second Annual Golden Gnomes Awards Ceremony at IPC SummerCom 2022

Five new award categories added this year

BANNOCKBURN, Ill., USA, May 18, 2022 — The second annual Golden Gnome Awards ceremony was held on May 10 at IPC SummerCom 2022.

The awards, inspired by IPC's fictional TechNet gnomes Clumpy and Kloumpios, recognize the outstanding and creative work of IPC A-Teams. IPC A-Teams are dedicated groups of volunteers within IPC working groups who take on a significant amount of work on behalf of their groups. The Golden Gnome Awards Ceremony has grown to be a must-attend event for IPC's technical standards volunteers, as their peers are recognized during a fun and light-hearted event.

"Not only does the Golden Gnome Awards event give us the opportunity to honour our standards development A-Teams and their members for their outstanding accomplishments throughout the year," said Teresa Rowe, IPC senior director, assembly and standards technology, "but we get a chance to roll out the red carpet – literally – as we celebrate our volunteers."

Setting the Golden Gnomes Awards ceremony apart from other awards events, this year's ceremony included a red carpet entry with a Golden Gnome photo op area for SummerCom attendees to show their gnome enthusiasm, as well as an awards ceremony format filled with laughter and fun.

A highly sought-after award by IPC A-Team members, each Golden Gnome Award trophy is created using a 3D printer and then hand-painted by an IPC staff liaison, making these trophies one of a kind. The gnomes for this year's trophies even donned cheese-head hats, a nod to Wisconsin, the host state for IPC SummerCom.

The 2022 Golden Gnome Awards winners are:

- **Outstanding A-Team Member of the Year** – Bob Cooke, NASA Marshall Space Flight Center
  This award is presented to an A-Team member who has gone above and beyond in their A-Team participation. This year's winner was.

- **Gnoble Gnome Award** – Leo Lambert, EPTAC Corporation

  This award recognizes the lifetime or long-term achievement of A-Team members who have demonstrated dedicated A-Team participation or leadership over multiple years and/or have shaped the way A-Teams work in developing IPC standards.

- **Emerging Engineer Award** – Christina Rutherford, Honeywell Aerospace
  This award is presented to one emerging engineer A-Team member

who has shown a high level of active participation on one or more A-Teams.

- **Editor of the Year Award** – Garry McGuire, NASA Marshall Space Flight Center
  This award recognizes outstanding work in editing documents as part of the A-Team.

- **Globetrotter Award** – Udo Welzel, Robert Bosch GmbH and Michael Ford, Aegis Software UK
  This award recognizes A-Team members who have demonstrated leadership and initiative in working with individuals and teams from outside their country for the benefit of their A-Team.

- **Gnome Spirit Award** – Cathy Hanlin, Precision Manufacturing Company, Inc. and Thomas Marktscheffel, ASM Assembly Systems GmbH & Co. KG
  This award is presented to A-Team members who have exemplified through their A-Team activity the spirit of being an A-Team member.

- **IPC Works Leaderboard Award** – Tiberiu Baranyi, Flextronics International
  This award recognizes A-Team members with the most activity on IPC Works, IPC's standards development community's collaboration and networking intranet.

- **Worker Bees of the Year Award** -- Team Smarties, which is developing IPC-8981, Quality and Reliability of E-Textiles Wearables
  This award is presented to A-Teams that have shown the most activity in IPC Works in the development of their standard.

- **A-Team Name of the Year Award** – Wire Nutz
  This award, which is selected by a vote of the IPC Committee Chair Council, goes to the A-Team with the most creative name.

- **Designer – Top Contributor Award** – French Design Council A-Team
  This award recognizes an A-Team or an individual from an A-Team for outstanding design-related contributions to IPC standards development.

For more information on IPC's Golden Gnome Awards, contact Teresa Rowe, IPC at TeresaRowe@ipc.org. For industry members interested in joining an IPC standards development committee and charting a path to their own Golden Gnome Award, visit www.ipc.org/ipc-standards.

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International Diary

2022

EIPC Summer Conference
Visit Ericsson Product Development Test Centre
14 & 15 June
Örebro, Sweden

18th EIPC Technical Snapshot Webinar
Registrations via www.eipc.org
September

KPCA Korea
21-23 September
Korea

EIPC @ FED Conference
29-30 September
Bamberg, Germany

19th EIPC Technical Snapshot Webinar
Registrations via www.eipc.org
October

TPCA Taiwan
26-28 October
Taiwan

EIPC @ Electronica
15-18 November
Munich, Germany