

**TOPPAN**

vol.110 Summer 2024

# CONVEX

- International -

Special Feature  
EXPO 2025 OSAKA, KANSAI, JAPAN



## Notice from the Public Relations Division

CONVEX *International* is an internal magazine for the TOPPAN Group. The title, CONVEX, is based on the meaning of the Chinese character “凸”, which is pronounced *totsu* in Japanese and is the first character in the word *toppan*. In the same way that a convex lens focuses light at a single point, the name of the magazine expresses the TOPPAN Group bringing together its “vibrant knowledge and technology.”

## Cover Photo (from left)

**Asuka Kato**  
Business Development Division, TOPPAN Holdings Inc./  
Joint Research Laboratory for Social Implementation of Cultured Meat, Osaka University School of Engineering

**Shotaro Akagi**  
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Information & Communication Division, TOPPAN Inc.

**MYAKU-MYAKU**  
Official Character, Expo 2025 Osaka, Kansai, Japan

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**Yoshiteru Itotani**

Managing Executive Officer  
Overseeing Expo/IR Promotion Office  
TOPPAN Holdings Inc.

## Let's Use the TOPPAN Group's Strength to Break New Ground Ahead of EXPO 2025

### **A priceless opportunity to showcase new technologies, products, and systems for a shining future in 2025 and beyond**

In April 2025, EXPO 2025 OSAKA, KANSAI, JAPAN will open its doors to the public on Yumeshima Island. The official theme of this World Expo is Designing Future Society for Our Lives, and its official concept is People's Living Lab—A laboratory for a future society.

TOPPAN has been involved broadly in all World Expos held in Japan, including Expo 1970 Osaka (the first World Exposition to be held in Asia), Expo 1975 Okinawa, Expo 1985 Tsukuba, Expo 1990 Osaka, and Expo 2005 Aichi.

For the first time, TOPPAN will be sponsoring a World Expo in Japan. Our sponsorship involves not only operating expenses, but a variety of technical

sponsorships. We made this decision because the theme of the expo, Designing Future Society for Our Lives, is highly congruent with TOPPAN's fundamental commitment to helping solve social issues by developing and delivering technologies and services.

The World Expo represents a priceless opportunity to showcase new technologies, products, and systems to visitors from around the world. Even if you are not directly involved in an expo-related business area, you can still engage in customer-focused activities. Let's unite as the TOPPAN Group and make EXPO 2025 a resounding success.

Special Feature

# EXPO 2025 OSAKA, KANSAI, JAPAN

# The Joyous World Expo Starts Soon!



EXPO 2025 OSAKA, KANSAI, JAPAN will be held at Yumeshima, Osaka Prefecture, beginning Sunday, April 13, 2025! In this issue we shine a spotlight on **TOPPAN's activities relating to EXPO 2025**. Let's join hands across the **TOPPAN Group** and make this World Expo even more exciting!



Official character  
**MYAKU-MYAKU**  
© Expo 2025

## EXPO 2025 Will Be the First World Expo Held in Japan in 20 Years



- Duration:** Sunday, April 13 – Monday, October 13, 2025 (184 days)
- Site:** Yumeshima, Osaka Prefecture
- Theme:** Designing Future Society for Our Lives
- Subthemes:** Saving Lives, Empowering Lives, Connecting Lives
- Concept:** People's Living Lab  
—A laboratory for a future society

## TOPPAN Locations Supporting the Kansai Area



### Nishinohon Division TOPPAN Inc.

Location: Nakanoshima Festival Tower, 2-3-18 Nakanoshima, Kita-ku, Osaka, Osaka Prefecture  
Access: Direct access from Higobashi Station on the Yotsubashi Subway Line and from Watanabebashi Station on the Keihan Nakanoshima Line

TOPPAN's main western Japan keypoint. We have an Expo Office and are working hard every day ahead of the Expo.

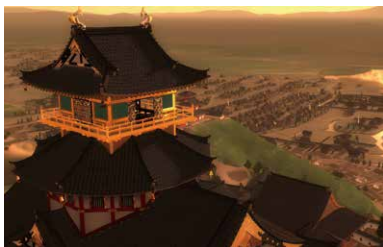
PLAZA21 Kansai



### Sakishima Satellite Office

Location: H-3, 4F, ITM, Asia and Pacific Trade Center (ATC), 2-1-10 Nankokita, Suminoe-ku, Osaka, Osaka Prefecture  
Access: Direct access from Trade Center-mae Station on the Nanko Port Town Line (New Tram)

This satellite office launched on March 1, 2024 to serve as the front line for Expo-related operations. It maximizes points of contact and strengthens collaboration with the Expo Association, located in the adjacent Osaka Prefectural Government Sakishima Building. This worksite is striving to boost productivity with enhanced operational efficiency for project handling.



### Nobunaga's Castle Museum

Location: 800 Azuchicho Kuwanomiji, Omihachiman, Shiga Prefecture  
 Access: 25-min walk from Azuchi Station on the JR Biwako Line

The Nobunaga's Castle Museum features a full-scale reproduction of the top (5th and 6th) floors of Azuchi Castle, which were exhibited at the 1992 World Expo in Seville, Spain. The model includes reproductions of paintings by Kano Eitoku that were commissioned by Oda Nobunaga. It also boasts an exterior covered in 100,000 sheets of gold leaf, and a roof topped with golden mythical animals. The splendor of Azuchi Castle comes to life again.

VR content: "Magnificent Azuchi Castle"  
 Production and supervision: Omihachiman City Castle keep restoration; Akira Naito (former president of Aichi Sangyo University)  
 Technical supervision: Tomohiro Fukuda (Graduate School of Engineering, Osaka University)  
 Production: TOPPAN Inc.



Experience a VR visit to the secret interior of the Saito pagoda

### Koyasan Digital Museum

Location: 360 Koyasan, Koya-cho, Ito-gun, Wakayama Prefecture  
 Access: 3-min walk from Kongobuji-mae bus stop on the Nankai Rinkin Bus bound for Daimon from Koyasan Station on the Nankai Railway Line

Located next to Danjo Garan, Koyasan's central temple complex, the Koyasan Digital Museum features a VR theater showing Koyasan content produced by TOPPAN, a cafe that serves local dishes, and a shop with original Koyasan merchandise. Experience the charm of Koyasan's rich cultural assets in this multifaceted cultural facility.

VR content: "Koyasan Danjo Garan Monastic Complex: The Land of Mandala"  
 Production cooperation: Koyasan Shingon Sect Main Temple Kongobu-ji  
 Production and copyright: TOPPAN Inc.



### PLAT UMEKITA

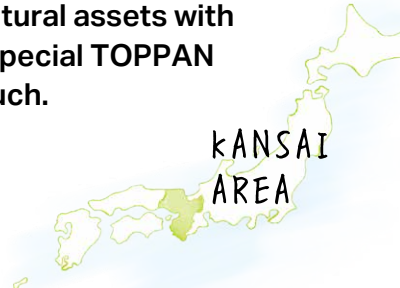
Location: Umekita Park, Kita-ku, Osaka, Osaka Prefecture  
 Access: Direct from Osaka Station (all lines)

This September, PLAT UMEKITA will open as a facility for information dissemination directly opposite Osaka Station. It is one of Japan's largest park-based information centers and is the product of collaborations between TOPPAN Inc. and various business enterprises and educational organizations. The facility will offer exciting experiences derived from the values of a new era and based upon the concept of "ethical-tainment."

Not just EXPO 2025!

# TOPPAN Kansai Locations

These TOPPAN-related locations are perfect for those visiting the Kansai area during EXPO 2025! Check out these popular tourist destinations and important cultural assets with a special TOPPAN touch.



VS.

Location: Umekita Park, Kita-ku, Osaka City, Osaka Prefecture  
 Access: Direct from Osaka Station (all lines)

Opens September 6, 2024. Operated in conjunction with Total Media Development Institute Co., Ltd. and Takuya Nomura Office, the facility will offer unprecedented experiences by linking technology and liberal arts, traditional culture and new ideas, and diverse cultures and initiatives, in Japan and beyond. Its advanced services will connect people, conceptualize projects, and express and disseminate them.



### átoa AQUARIUM×ART

Location: 7-2 Shinko-cho, Chuo-ku, Kobe, Hyogo Prefecture  
 Access: 18-min walk from Sannomiya Station (all lines), get off at Shinko-cho bus stop on the Shinki Bus Port Loop or other local bus

TOPPAN Group company Total Media Development Institute Co., Ltd. designs and produces the exhibits for this facility that opened in 2021. The theater-type aquarium boldly fuses stage design and digital art, drawing visitors into a mysterious world never before experienced.

Photo courtesy of Gran Green Osaka Developers



# EXPO 2025 & TOPPAN

Ahead of the opening of EXPO 2025 OSAKA, KANSAI, JAPAN, many TOPPAN Group teams are moving ahead with preparations. Four TOPPAN Group employees, each with a different affiliation, participated in a roundtable discussion.



**Shotaro Akagi**

Expo IR Office/Nakanoshima  
**TOPPAN Inc.**



**Asuka Kato**

Business Development Division/Joint Research  
Laboratory for Social Implementation of Cultured Meat,  
Osaka University School of Engineering  
**TOPPAN Holdings Inc.**



**Saki Nakamura**

Business Development Department,  
Social Innovation Center,  
Information & Communication Division  
**TOPPAN Inc.**



**Iori Okuda**

Expo Virtual Academy Promotion Office  
**Tokyo Shoseki Co., Ltd.**

**Q. Tell us about *your respective initiatives* ahead of EXPO 2025.**

**A.**  
I'm responsible for liaison with Expo associations and local government offices.

**A.**  
I'm preparing to exhibit cultured meat, also known as "food of the future," for which I'm collaborating on research.

**A.**  
I'm working on an automated translation system to support conversations and communication.

**A.**  
I'm preparing an exhibit booth where visitors can experience the future of learning.



# Futures That Start with the Expo

—What kind of future do you want to realize through the Expo?

**Okuda:** At Tokyo Shoseki, our goal is to give each child a diverse range of ways to learn, ways that match their uniqueness.

**Nakamura:** We want to see a future where language barriers are eliminated as soon as possible in schools, local government, and public transportation. For example, schools are receiving students from sister schools overseas, but the teachers struggle to communicate with these foreign students. Teachers may need to study a foreign language along with their usual responsibilities. We want to focus on helping them, and solve staffing shortages as well.

**Akagi:** Enthusiasm is really building in Osaka ahead of the Expo. And after the Expo concludes its run, it would be ideal for TOPPAN to be everywhere in the communities of the future.

—What are your expectations for the Expo?

**Nakamura:** I want foreign visitors to learn about the power of Japanese technology.

**Kato:** In an era when social networking is so widespread, I honestly think it's very hard to create something that can't be experienced without actually going there. I'd really like to see our exhibitions presented and publicized in a way that makes people want to visit the venue. I have a four-year-old child, and I hope the Expo will be a place that will excite them and expand their sense of all the potential the future holds.

**Akagi:** I want as many people as possible to experience the Expo.

**Okuda:** Good point. Because of the influence of the pandemic, a lot of things moved online. But I think that now, people are rethinking the importance and value of real places and appreciating them more. I invite people to see the Expo with their own eyes, and experience its atmosphere. And I sincerely hope the Expo will generate enthusiasm not just in Osaka, but throughout Japan.



For the next  
**CHALLENGE**

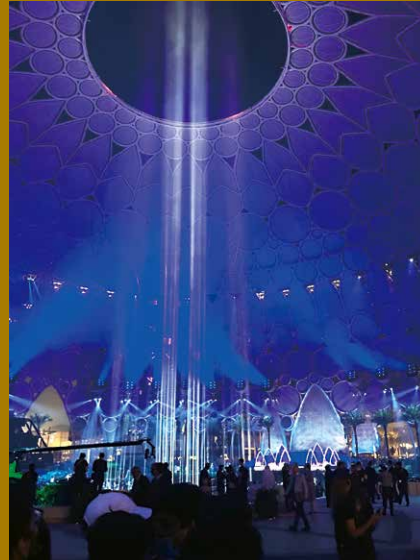
## EXPO 2020 Dubai Report

### Yoshifumi Otake

Senior Team Leader, Expo Business Promotion, Information & Communication Division, TOPPAN Inc.

EXPO 2020 Dubai was held in the Emirate of Dubai, one of the seven emirates of the United Arab Emirates (UAE). It was delayed by a year due to COVID-19 but was the first world expo to be held in the Middle East and enjoyed participation from 192 countries and regions under the theme of "Connecting Minds, Creating the Future."

EXPO 2020 Dubai became crowded from the evening onwards because people were avoiding the heat during the day, but I saw a lot of groups of local elementary and junior high school children visiting in the mornings and at other times when it was not



The iconic Al Wasl Plaza was a central feature of Expo 2020.

busy. I hope the EXPO 2025 can be a platform that inspires children to dream, as they are the ones who will shape the future.



The Opportunity Pavilion

## Expectations for the EXPO 2025 and about Japan

### Kenny Yeo

SVP, Group Brand & Marketing, TOPPAN NEXT (Singapore)

I set the strategic direction for branding and marketing at TOPPAN NEXT, a Singapore-headquartered wholly-owned subsidiary of the TOPPAN Group. My team imagined, designed and built toppannext.com as well as toppannexus.com for our subsidiary TOPPAN Nexus.



I was lucky to visit TOPPAN HQ in Tokyo and was curious about the googly-eyed MYAKU-MYAKU, the EXPO 2025 official mascot, which certainly is a conversation starter. I then looked it up online, and learned MYAKU-MYAKU was born in 1971.

For EXPO 2025, whose theme is "Designing Future Society for Our Lives," I expect Osaka to be very crowded during the six months, as people come together to discuss the SDGs with five years to go before the target year of 2030.



### Stephany Barnes

Executive Assistant to the President, Company Administrator, Administration Department, Toppan America Inc. (USA)

I support administrative processes within Toppan America (TA) and designed our current public website. One of my current goals is to expand TA's internal resource infrastructure.

We will be closely approaching the Kyoto Protocol's 28th anniversary at the time the EXPO 2025 is held, and I anticipate another great success in Osaka.

Much like with TOPPAN itself, I believe our greatest

strength at the World Expo is the coalition of so many diverse global backgrounds and perspectives. In a time heavy with division, I hope this unity will bring us closer to a solution!

While I'll always want to drop by Osaka, I'd really like to visit Hokkaido and Shikoku—having only traveled the length of Honshu. I someday also hope to visit Yakushima.





Don't Miss It!!

# TOPPAN's Exhibits and Solution Sponsorship

The TOPPAN Group is not only providing support as a partner for EXPO 2025, it is deploying booths and exhibits and helping to deliver technologies and solutions. Through this diverse range of involvement, the Group is working to realize the ideals of the Expo's theme, Designing Future Society for Our Lives, and adding color to the event.

● Sponsorship: Information & Communication Division, TOPPAN Inc.

## Automated Translation Systems Will Enable Anyone to Enjoy the Expo

TOPPAN will sponsor automated translation systems for EXPO 2025 as part of the Expo's Future Society Showcase Project: Digital Expo. Three systems will be available: VoiceBiz, a translation application, RemoteVoice for guided tours, and Multilingual Simultaneous Interpretation System for seminars and symposiums. Each system will be customized for use during the Expo.

In addition, TOPPAN is collecting and translating Expo-related technical terms and producing a glossary to enhance the quality of multilingual translations for the entire Expo. Extensive pilot testing and development are currently under way to make language-barrier-free communication a reality at the coming Expo, from multilingual interactions between visitors and venue staff to guided tours and events.



Automated simultaneous interpretation for seminars, symposiums, etc.



Multilanguage translation for guided tours, etc.

Illustration courtesy of Japan Association for the 2025 World Exposition

● Exhibition: Tokyo Shoseki Co., Ltd.

## Visitors Will Enjoy the Classroom of the Future, with Ideal Learning Environments Suited to Every Individual

Tokyo Shoseki is a premium partner of the Osaka Healthcare Pavilion, operated by the prefecture and city of Osaka in collaboration with industry, government, and academia. The pavilion and its exhibits will be located in the Future City zone. The pavilion theme is Own Education, Own Life, a society where people can learn, teach, and live healthy lives in ways that suit them. The exhibits will present a vision of Learning in the Future, with each individual capable of vibrant, healthy living through learning that suits them perfectly.

A Classroom of the Future booth is planned for the pavilion, equipped with a Blackboard of the Future that will enable visitors to experience ways of learning interactively. Through an exhibit experience supported with the latest technology, visitors will enjoy a personalized future learning experience, and preparations are under way. The exhibits are sure to provide thrills and excitement for all, and we look forward to your visit.



Photo courtesy of Osaka Pavilion Association

Osaka Healthcare Pavilion



Blackboard of the Future (concept)

## ETHIOPIA

### TOPPAN Gravity Establishes New Passport Manufacturing and Issuance Plant Through Joint Venture with Ethiopian Government



TOPPAN Gravity Ethiopia, a joint venture between TOPPAN Gravity and the government of Ethiopia, held the groundbreaking ceremony for a new passport manufacturing and issuance plant in Addis Ababa, Ethiopia, on May 8.

TOPPAN Gravity and the Ethiopian government established TOPPAN Gravity Ethiopia in July 2023 to drive the manufacture and issuance of passports, IDs, driving licenses, and other government-issued documents. The TOPPAN Group holds a 51% stake in the company via TOPPAN Gravity's UAE-based subsidiary Gravity Group Ind. L.L.C and one other company, while the Ethiopian government holds a 49% stake through the Ethiopian national printer and two other companies.

The new plant will draw on the TOPPAN Group's accumulated security printing and data processing technologies as well as its expertise in the handling of personal information to help drive the development of public infrastructure in Ethiopia. TOPPAN will also provide support for onsite operations and contribute to job creation in Ethiopia.

## SINGAPORE

### AST Breaks Ground on Singapore Facility for High-end Semiconductor Packaging Substrates and Advanced Technology Development



Advanced Substrate Technologies (AST), a Singapore-based subsidiary of TOPPAN Holdings, broke ground for the construction of its new factory in Singapore on March 14 this year.

The factory will be the first in Singapore to manufacture high-end FC-BGA substrates used in bleeding-edge semiconductor products such as network switches and artificial intelligence and machine learning devices. The production ramp-up is part of TOPPAN's strategic growth plan to address increasing global and regional demand for advanced substrates and complements its main production hub in Japan. AST will also conduct R&D on advanced substrate technologies to meet future performance demands.

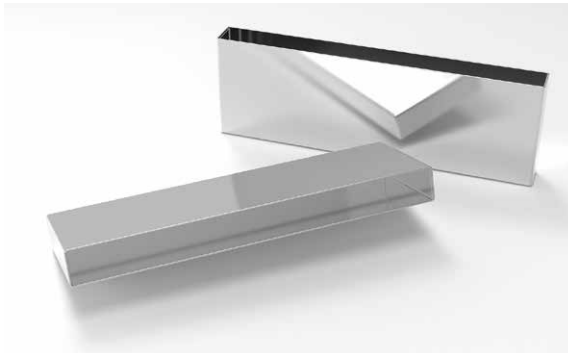
With a target to start production by the end of 2026, AST's facility will implement state-of-the-art factory automation to produce substrates of the highest quality and yield. With up to 95,000m<sup>2</sup> of floor space, the factory will employ more than 200 high-tech engineers and skilled technicians, in addition to operators, providing them with opportunities to learn and lead in the field of FC-BGA substrate manufacturing and development. AST's initial and key hires for FC-BGA substrate manufacturing will undergo intensive training in TOPPAN's factories in Japan.

TOPPAN's cutting-edge substrate technology is proven in the products of leading semiconductor companies worldwide, and the most advanced manufacturing know-how will be brought to AST's production lines.

JAPAN

**TOPPAN Holdings and Toyo Seikan to Sign LOI on Establishment of Joint Venture Manufacturing Packaging for Automotive Lithium-Ion Batteries in Europe**

TOPPAN Holdings and Toyo Seikan will sign a letter of intent (LOI) on the establishment of a joint venture that will manufacture and sell packaging for automotive lithium-ion batteries in Sweden. The joint venture will aim to launch manufacturing operations in fiscal 2026 or later.



Manufacturing and sales company to be established in Sweden to strengthen supply capabilities for lithium-ion battery packaging and contribute to the growing electric vehicle market

In 2011, TOPPAN Holdings and Toyo Seikan established T&T Enerstechno Co., Ltd. as a joint venture manufacturing packaging for lithium-ion batteries used in smartphones and electric vehicles (EVs) in Japan.

EV sales are expanding globally as carbon neutrality is targeted, and efforts to promote the switch to EVs are underway in the European Union with the introduction of a CO<sub>2</sub> reduction target requiring all new cars to be zero-emission from 2035. This is driving demand for square cans used as packaging for lithium-ion batteries at European automakers, but due to considerations related to transportation efficiency, there are calls for production closer to where they are needed.

TOPPAN and Toyo Seikan will therefore sign an LOI on establishing a joint venture in Sweden to strengthen their supply of lithium-ion battery packaging.

After establishing the joint venture, TOPPAN and Toyo Seikan aim to launch manufacturing operations in Sweden in fiscal 2026 or later. The two companies hope to contribute to carbon neutrality through the business of lithium-ion batteries for EVs.

COLUMN

**Annual Production Control Workshop Held at Toppan Photomask Korea**

Greg Easley, VP Front-End of Toppan Photomask, and 10 country production control managers and regional directors from all over the world attended the annual production control (PC) workshop, which was held from May 7 to May 9 at Toppan Photomask Korea.

The Global PC Workshop is a special gathering held at locations in each manufacturing country in a round-robin format. The policy for the new fiscal year is set out with breakdowns and strategies for each site and a shared mission for combined resources, including main functions and capacity.

As the owner of Global PC, Greg Easley kicked off the workshop with this year's theme of "Optimization of TPC Global Operation Profit with Better Accuracy".



A variety of topics were discussed at the workshop, such as the monthly capacity allocation procedure and responding to sales forecasts, especially in relation to customers' contractual commitments and long-term service agreements. It also covered new qualification initiatives, the progress of scheduling using artificial intelligence, and the establishment of global standards for new or adjustment procedures. The dialogues were lively, resulting in a very productive workshop. However, it wasn't just packed with discussions. We enjoyed team activities, such as having a memorable time walking and talking together at Hwadam Forest on the last day. The Global PC workshop is an engine for us to bolster our knowledge, best practices, and goals for the profit of global operations. It also gives us momentum to enhance global teamwork, driving maximum efficiency and communication across our global network.



Participants: Top from left, Greg (VP and Owner, HQ), Sakai-san (Asia director), Andreas (Dresden manager), Hans (Shanghai manager), Michael (Taiwan manager), JH (Korea manager). Bottom from left, Noriko (Japan manager), Joe (USA director), Rino (US manager), Hori-san (Japan optimization manager), Jeff (Global director).

# TOPPAN World SEEDS

In this section, we introduce you to employees working at TOPPAN Group companies around the world.

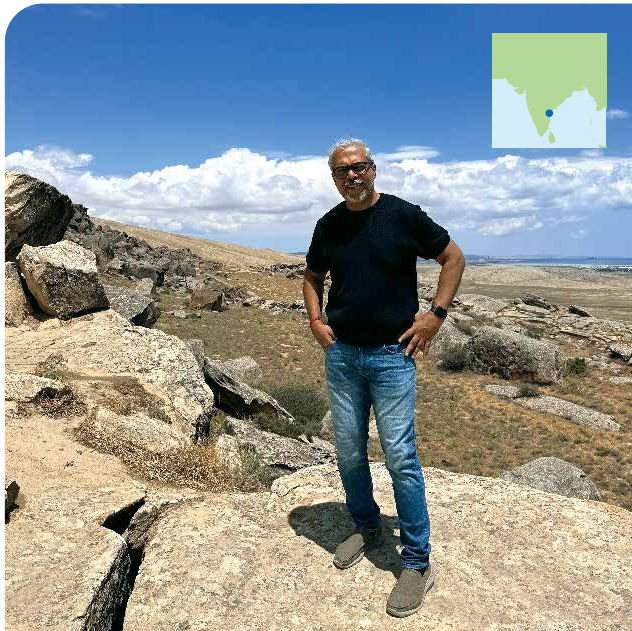


## File10 India



### About India:

- Area: 3,287,469 km<sup>2</sup>
- Population: Approx. 1.4 billion (2022)
- Major language: Hindi



I have been with Toppan Merrill since 2006. I manage the India service and operations teams who support and partner with our colleagues in the US, Europe and Asia. My current objective is to elevate the knowledge and skillset of the India organization while also focusing on efficiency. This will ensure that new mandates by the regulatory authorities in the US are seamlessly implemented in India.

### REPORT

Our company is situated in two cities in Southern India in the state of Tamil Nadu. Chennai is the capital city and has many historical landmarks including some of the oldest temples in India. Marina beach is one of the longest beaches in the world and stretches nearly 12 kilometers. It is a favorite tourist spot for locals and visitors. Chennai has become a multi-cultural city over the past several years, featuring cuisines from all over the world. Rice is typically the base dish for Chennai cuisine.



A typical South Indian meal



**Raju Subramanyan**  
Executive Vice-President  
Operations and Business  
Development, Operations  
Toppan Merrill India

### Toppan Merrill India

Toppan Merrill India was established in 2006 and started with 200 employees; we have since grown to 1200+ employees. We have three facilities in India—two in Chennai and one in Coimbatore—and we are a 24/7 operation. We are in the regulatory disclosure and communications business, which is highly complex, has critical deadlines and is constantly changing. We are a very client-centric organization and create time-sensitive documents which need to be filed with the regulatory authorities in the US, Europe and Asia.



- Location: Chennai, India
- Business: Providing financial printing services