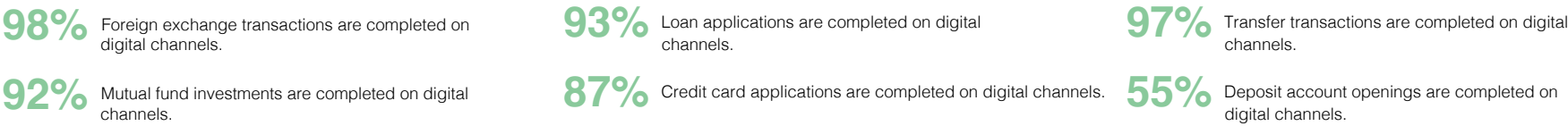


3.4 FinTech and Innovation

GRI: 203-1

Sustainability and digital transformation are key to corporate development. E.SUN Bank has integrated ESG principles into domestic and international business expansion, high-end customer engagement, fintech initiatives, and the management of three lines of defense, establishing itself as a human-centered digital financial leader. E.SUN Bank boasts a technology team of over one thousand professionals responsible for comprehensive digital development, intelligent applications, information research and development, and cybersecurity management. Through five major AI applications encompassing research and development services, marketing, processes, risk management, and empowerment, we leverage financial intelligence as a core competitive advantage. In the global movement towards net zero and the adoption of AI technologies, E.SUN Bank upholds the vision of "Every staff in E.SUN becoming world-class citizens and E.SUN becoming a world-class corporate citizen." We actively harness our financial influence to assist society in achieving dual transformation in sustainability and digitalization. In the realm of digital finance, E.SUN Bank is committed to promoting inclusive finance, intelligent finance, and scenario-based finance. During the year 2024, we achieved significant performance in our digital channels, with specific outcomes detailed as follows:



■ Services Supported

Digital foundation Through the optimization of generative AI platforms, enhancement of cloud backup, and improvement of resource utilization efficiency, we are actively promoting digital transformation to ensure information security and service resilience while enhancing innovative service capabilities. The outcomes for 2024 are as follows:

Topics	Strategy Directions
AI Technology	Optimize the usage of the generative AI platform - GENIE for our staff, integrating E.SUN's unique knowledge base, adding image and audio recognition capabilities, and expanding the user base while ensuring information security, regulatory compliance, and budget management.
	E.SUN Bank is proactively developing Retrieval-Augmented Generation (RAG) technology, with its initial application case being the "E.SUN New Employee AI Assistant," which supports new employees in asking foundational financial knowledge questions before, during, and after training sessions, receiving generative responses. This serves as a pocket assistant for frontline staff, enhancing their learning and work efficiency.
Operational Resilience	To maintain the minimum service level in extreme scenarios, critical business data has been backed up to the cloud since 2024. Continuing to leverage cloud advantages in 2025, we are planning to migrate core system backups to the cloud. This will ensure the preservation of vital business data and the provision of basic financial services during extreme situations, thereby safeguarding customer rights.
	In order to enhance the availability of overseas information systems and reduce the impact on services in overseas branches, we continue to plan and promote the migration of servers to the public cloud in other overseas branches. In 2024, we had completed the migration of servers in our Singapore, Japan, USA overseas branches to the public cloud.
Resource efficiency	To enhance resource utilization and implement a resource reclamation mechanism for virtualized environments, we adopt regular analysis and reclamation to achieve optimal resource allocation.
	In order to increase productivity, we implement the collaboration platforms and digital tools in the development process and optimize workflows through AI tools.
	Intelligent Banking Division will audit and upgrade third-party Python packages, establishing a unified package version management system. Over the course of six months, the number of package versions were reduced from 16,000 to approximately 500, significantly lowering the maintenance costs.
Agility and Resilience	E.SUN's overseas branches have fully implemented an SD-WAN (Software-Defined Networking in a Wide Area Network) design to enhance the integrated utilization of existing leased lines. We will further refine the architecture to reduce line costs in the future.
	Continuing to expand the usage of container platforms will enable rapid application delivery, automated deployment and operations. Container technology also allows for automated scaling to enhance system reliability, ensuring uninterrupted application services.
	Cloud Service has the diversity and high availability, and complement with on-premises services, more information service requests will be achieved by using both cloud and on-premises service. At the same time, the security of using cloud services is ensured through a security management framework.
Cybersecurity Monitoring	E.SUN Bank has designed cybersecurity anomaly monitoring scenarios based on cloud characteristics and has implemented cloud personal data scanning and monitoring management mechanisms to ensure the security of cloud service usage.

Protecting Patented Technology

E.SUN adopted the Taiwan Intellectual Property Management System (TIPS) in 2020, and passed the TIPS A-Level verification. Through measures such as intellectual property risk assessment, patent proposal review mechanisms, education and advocacy related to intellectual property, we have implemented intelligent services and leveraged our technological advantages. In 2024, we commissioned a patent firm to construct a patent map for E.SUN Bank, which will aid in understanding the current distribution of our technologies and competitive dynamics with peers, as well as assist various departments within the bank in planning future patent application directions, thereby enhancing patent management efficiency. E.SUN Securities has obtained patents in areas including digital services and AI applications for business.

Patents Granted in E.SUN

223 patents

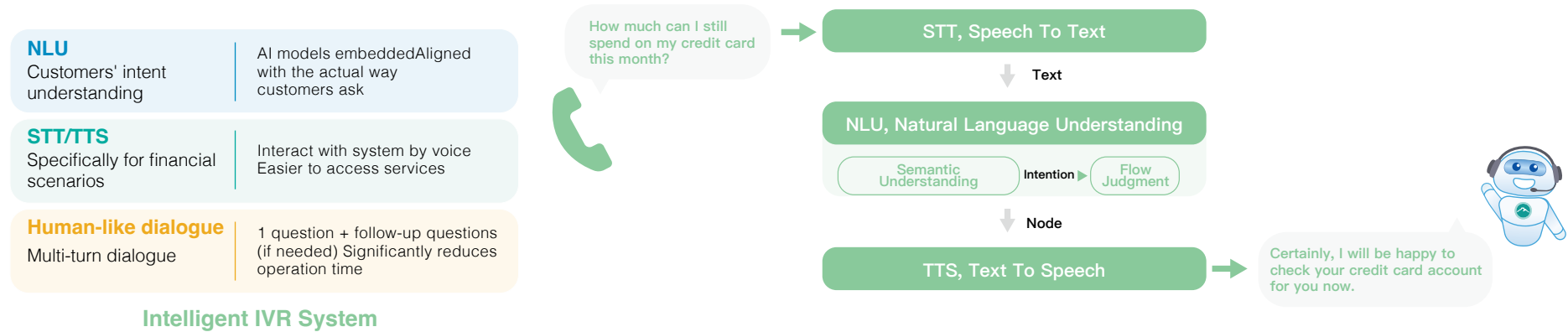
	Invention patents		Utility patents		Design patents	
	Bank	Securities	Bank	Securities	Bank	Securities
Announced in 2024	15	1	10	1	3	2
As of the end of 2024	80	6	101	3	29	4

Financial Innovation Applications

Optimization of Digital Services to Enhance Customer Experience

Intelligent IVR System	In the second quarter of 2024, we added a new feature of "Intelligent Customer Service System", with 24-hour real-time response capabilities to address common inquiries, employing a "human-machine collaboration" model to enhance service experience. By 2024, E.SUN Bank ensured that all customer service positions are fully operational, achieving a total of 1.68 million service interactions annually.
E.SUN Artificial Intelligent Platform	<p>Focusing on a customer-centric approach, we have developed "E.SUN Artificial Intelligent Platform" to achieve innovations in financial applications. We offer four key solutions characterized by being "Variety, Speedy, Quality, and Stability," and have secured multiple patents for technologies such as interactive voice response and intelligent product recommendations. In 2024, we were honored with the Excellent Award in the Best Digital Finance category at the Taiwan Banking and Finance Best Practice Awards:</p> <p>(1) Variety Product Applications: The "Integrated Application Module" addresses the issue of customers having to repeatedly fill out application information. With a diverse range of product combinations, we facilitate approximately 400,000 financial service applications annually for E.SUN Bank.</p> <p>(2) Speedy Application Journey: By leveraging "Process AI" for data recognition and enhancing it with our proprietary income recognition and risk assessment models, we have increased service application speed by 50%.</p> <p>(3) Quality Experience & Interaction: The introduction of "Service AI" incorporates technologies such as Speech-to-Text (STT), Natural Language Understanding (NLU), and Text-to-Speech (TTS), which results in a 60% reduction in customer service waiting times.</p> <p>(4) Stability Risk Management: Utilizing "Risk Control AI," we can detect anomalous transactions, providing real-time protection for customer assets within 0.1 seconds.</p>
Mobile Banking	<p>ESUN Mobile Banking integrates banking, securities, and insurance services, offering a one-stop financial solution. In 2024, we will continue to focus on enhancing customer experience by providing diverse services:</p> <p>(1) Convenient Self-Service Options: We have expanded our self-service offerings to include new features such as passbook, issuance, time deposit services, loss reporting for seals, financial card management, balance confirmation for deposits, online NTD account closure, and QR code-based cardless withdrawals. Additionally, we aim to broaden our user base by providing instant account data connectivity for sole proprietors, enhancing the convenience of our digital services.</p> <p>(2) Integration of Securities and Insurance Products:</p> <ul style="list-style-type: none">· The E.SUN Mobile Banking now includes an IPO payment feature for E.SUN Securities ETF, which automatically populates payment information and provides seamless transaction services. We have also introduced an entry point for "Stock Saving" and functionality for stock account inquiries on the Taiwan Stock Exchange. This encourages customers to agree to data sharing, allowing them to view total market capitalization, overall inventory gains and losses, and total return rates of E.SUN Securities. Furthermore, users can easily navigate to the E.SUN Securities app to complete transactions.· Our 24-hour mobile banking service allows customers to purchase travel comprehensive insurance, offering flexible choices among various plans, such as travel inconvenience insurance and overseas medical coverage, thus providing convenient and expedited insurance services.
Digital Saving Account	In order to enhance customer experience and service efficiency, we are introducing an integrated digital deposit account service in September 2024, which will significantly upgrade the account opening process. Customers will be able to complete their account application online and subsequently verify their identity at a bank branch. This improvement is expected to increase branch efficiency by reducing processing time by over 50%. Additionally, we will offer services such as passbook issuance and online enhancements for non-designated transfer limits as part of our standard account offerings. Existing digital account customers will also have the opportunity to upgrade their accounts after completing video verification through the E.SUN Mobile Banking, enabling them to enhance their account benefits without needing to visit a branch. This initiative aims to provide a more comprehensive digital service experience.

Find needed services in **17s**,
Accuracy rate over **85%+**



Intelligent Fraud Prevention, Enhancing Fraud Risk Management

Anomalous Account Detection	E.SUN Bank established the "E.SUN Sentinel Model" for anomalous account detection in 2018, becoming the first financial institution in Taiwan to transform the complex logic of internal alert management reports into model factors. In 2024, accounts that triggered warnings by the Sentinel Model constituted approximately 60% of the watch-listed accounts at E.SUN Bank, resulting in a reduction of approximately 53.6 personnel for detection each year and saving around 325 hours of manual processing time daily. Through the ongoing control of the model, a total of 4,571 accounts have been monitored, preventing the further dissemination of funds amounting to NT\$71.82 million.
Credit Card Fraud Detection	E.SUN Bank employs expert experience and AI models, having launched the "Intelligent E.SUN Fraud Prevention System (IEFPS)" in 2019. This system accurately and swiftly detects and comprehensively prevents unauthorized transactions through human-robot collaboration (HRC). In response to rapidly changing market risks, the model updates have increased from a monthly to a weekly cadence. For instance, in 2024, the system effectively prevented losses due to fraud amounting to NT\$885 million (an average of NT\$73 million per month).
ATM Image PoC	E.SUN Bank, in collaboration with the National Police Agency, Ministry of the Interior (NPA), has planned to install external surveillance cameras in ATMs throughout Taiwan. In 2024, we introduced a real-time alert mechanism for "suspected fraudulent domestic financial accounts," strengthening anti-fraud measures at branches and safeguarding financial order and public asset security. Within less than one month of launching the system, multiple suspicious accounts were identified, totaling amounts exceeding NT\$7 million.
External Cross-Domain Collaboration	<ul style="list-style-type: none"> Since 2022, E.SUN Bank has partnered with NPA's 165 system platform. This collaboration allows customers to report suspicious calls, messages, or websites to the customer service center. The police then coordinate with telecom operators to suspend services and block keywords. As of the end of 2024, 6,588 entries of blacklisted data have been provided through this platform. Starting in 2023, E.SUN Bank signed an anti-fraud agreement titled "Unite Now to Combat Fraud," with the NPA. When customers suspect fraud and call E.SUN Bank for confirmation, a three-way connection with the 165 anti-fraud hotline is established. This reduces the time for case handling from 30 minutes to 10 minutes. By the end of 2024, over 230,000 calls related to the 165 hotline and related fraud consultations have been received, with 203 calls for real-time online fund interception occurring within 24 hours, accumulating a total amount of about NT\$6.94 million in secured funds. In the first half of 2024, E.SUN Bank initiated a five-month pilot project on "Cross-Financial Industry Joint Learning for Anti-Fraud Technology," focusing on compliance and data confidentiality to better understand diverse patterns of financial fraud. This initiative aims to enhance detection accuracy and upgrade fraud prevention capabilities.

Data-Driven Business Development and Growth

Visualization of Institutional Relationship Networks	E.SUN Bank extracts relational information from its data and implements Neo4j graph database technology and graph algorithms. By constructing a data structure consisting of "nodes" and "links," we creates a comprehensive relationship network of E.SUN Bank that elucidates existing risks and opportunities between nodes. This tool is applied to establish personal and corporate relationship mappings. In 2024, this technology was used for corporate management and AML due diligence, while also planning risk control mappings for high-end customers. This allows for a simpler, faster, and more stable method to explore relational information, enabling a broad understanding of customer data through multiple channels.
E.SUN Platform of Interactive Communication	The next-generation E.SUN Bank Platform of Interaction Communication is designed to enhance the quality of customer engagement through intelligent recommendations and customer insights. This platform facilitates targeted marketing communications throughout the customer journey, thereby supporting marketing efforts and community management. By utilizing a drag-and-drop interface, the platform captures customer behavior and generates lists based on specific triggering conditions, thus enhancing data application capabilities and effectively seizing business opportunities. Additionally, it optimizes diverse customer journeys and communication channels, further promoting the sustainable development of innovations in financial applications.
Intelligent Real Estate Collateral Valuation	E.SUN Bank is committed to continuously optimizing the digital customer journey. In June 2024, we launch a new "Real Estate Collateral Valuation " feature, allowing customers to estimate property prices and potential loan amounts online. This feature will also provide information on nearby schools, transportation facilities, and hospitals, as well as actual transaction data for similar properties. This comprehensive offering enhances the digital experience for customers from the home purchasing process to loan application.
e-Personal loan	<ul style="list-style-type: none"> In August 2024, E.SUN Bank became the first bank in Taiwan to receive approval from the Financial Supervisory Commission (FSC) to pilot the use of a "Financial Assessment Model" to replace physical documentation for unsecured lending. This model is estimated to be applicable to 47% of the employed population, approximately 4 million people in Taiwan. User Experience: 33% of loan applications can be completed within 24 hours, and 47% receive results within 48 hours. After signing, funds can be disbursed within as little as 3 hours. Operational Effectiveness: The Net Promoter Score (NPS) has significantly improved from 68.3 in 2023 to 75.4 in 2024. The digital loan experience is now widely accessible, with over 97% of personal loans completed online. Loan approvals in 2024 surpassed NT\$100 billion, representing an increase of approximately NT\$16.8 billion compared to 2023. Additionally, E.SUN Bank has broadened its reach to service a wider customer base, processing over 150,000 applications by October 2024, compared to 135,000 in 2023.
GRACE Asset Allocation Service System	E.SUN Bank has developed and patented the "GRACE" intelligent financial management service system, which allows for real-time assessment of customer investment portfolios. The system provides product adjustment recommendations based on customer needs and conducts comprehensive evaluations of asset allocation situations, ensuring effective risk management. By combining technology with attentive service, we assist customers in planning appropriate trust services.

Talent Development and Promotion of AI Advancements

Staff AI Education Training	E.SUN Bank provides tailored AI education and training suitable for various positions. In 2024, a total of 158 staff participated, contributing 150 hours to AI education and promotion. In addition to incorporating AI-related financial technology content into foundational training, we also introduced AI advanced managerial courses, AI leader training programs, and Business Unit trainee seed programs, all aimed at cultivating excellent staff with professional AI literacy. We also organized numerous external and overseas exchange activities, GENIE Workshops, and encourage staff participation in courses offered by Taiwan Academy of Banking and Finance.
E.SUN AI Open Challenge	E.SUN Bank is committed to fintech innovation and has successfully hosted 10 AI challenges, attracting 7,200 teams and over 11,980 participants. In 2024, in collaboration with the Ministry of Education and National Tsinghua University (THU), E.SUN Bank established a regular exchange platform through these challenges, allowing talented individuals interested in entering the AI field to access resources for practice and challenge at any time, thereby nurturing more AI talent for Taiwan.
Industry-Academia Collaboration	Since 2018, E.SUN Bank has collaborated with numerous universities and colleges across six major departments, involving over 60 key professors and 350 students in artificial intelligence technology research and development. This collaboration has yielded over 110 research outcomes, published 13 papers, and hosted 12 result presentation conferences, bringing together the strengths of academia and industry to spur fintech innovation.



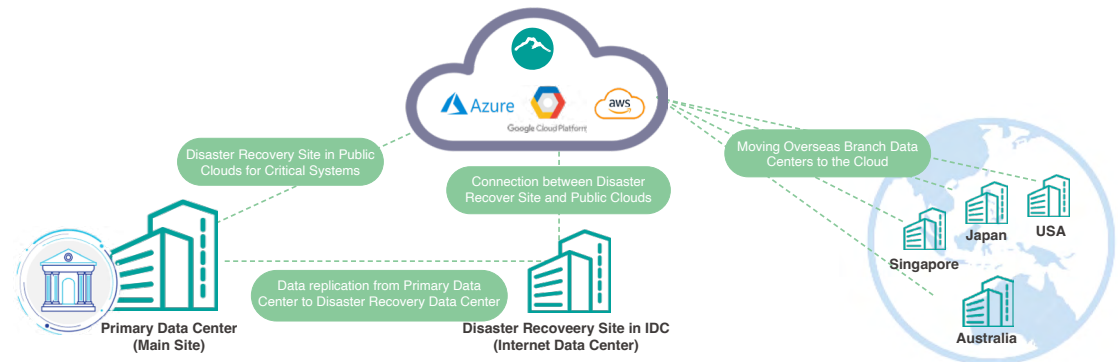
E.SUN AI Open Challenge

Examples of Cloud and Carbon Reduction

- Using hybrid-cloud architecture, we enhance computing efficiency and resource reuse to support carbon reduction and better governance.
- In 2024, we conducted data center architecture adjustments, including relocation of the Disaster Recovery Site and migrating the server rooms of overseas branches (Singapore, Japan, and USA) to the cloud.
- In 2025, we are going to migrate the Australian branch's server room to the cloud and decommission the domestic legacy server room.

FinTech Industry Alliance

The FinTech Industry Alliance was jointly established by the FSC and the Bankers Association. E.SUN FHC leads one of the four working groups on digital finance practices, focusing on data integration and fintech infrastructure to build a secure, inclusive, and trusted financial environment.



The Big Picture of E.SUN Hybrid Cloud Management

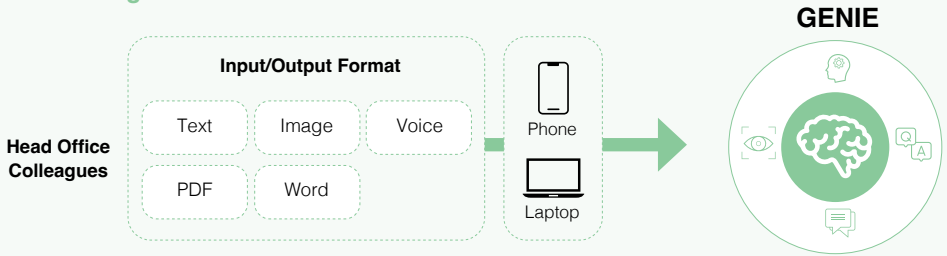
AI Governance Framework

In alignment with the regulatory authority's release of the "Guidelines for Artificial Intelligence (AI) Applications in the Financial Industry," along with its six main chapters, E.SUN Bank has adjusted its organizational structure to establish an Artificial Intelligence Management Committee. We are actively drafting internal regulations for E.SUN FHC and E.SUN Bank while meticulously planning risk assessment and management processes for the use of AI. Our commitment lies in providing a secure information security environment for both staff and customers, along with a user-friendly AI interface that balances simplicity with usability.

E.SUN Bank General-purpose GAI Platform GENIE 2.0

- A multimodal generative AI platform for staff use, which has seen a 238% increase in usage and a 72.8% rise in conversation frequency following its upgrade from version 1.0 to 2.0.
- In 2024, we introduced a new mobile device version, implement image/document/audio recognition features, and enhance the intelligent meeting notes system with expanded user applications.
- Uploaded files in image or PDF format will undergo optical character recognition (OCR), while audio files will be processed for speech-to-text conversion. Users can also edit the recognition results accordingly.

GENIE Usage Process



GENIE Application Scenarios

text/image generation	programming instruction	translation	audio/vedio data extraction
meeting minutes generation	classification/analysis	data analysis and instruction	direct meeting minutes output
summary	comparison of regulatory documents	customer sentiment analysis	more accurate code generation