About Synechron

Accelerating Digital for Banks, Asset Managers, and Insurance companies.

Synechron is a leading Digital Consulting firm and is working to Accelerate Digital initiatives for banks, asset managers, and insurance companies around the world. We achieve this by providing our clients with innovative solutions that solve their most complex business challenges and combining Synechron’s unique, end-to-end Digital, Business Consulting, and Technology services. Based in New York, the company has 18 offices around the globe, with over 8,000 employees producing over $500M+ in annual revenue.

Unlike other firms, Synechron’s “Power of 3” approach and financial services expertise gives us a competitive edge to tackle our clients’ problems from any vantage point with great depth. Synechron combines the “Power of 3” - business process knowledge, digital design and core technology delivery excellence – to drive transformative solutions. We have the unique ability to provide an end-to-end approach, from business consulting through technical development to digital enhancement. This empowers us to deliver solutions to some of the toughest business challenges.

Our Value proposition

A unique approach to market differentiation in the financial services domain

Technology

- Technology Consulting
- Application Development
- Automation
- Enterprise Architecture & Cloud
- Quality Assurance
- Systems Integration
- Data & Analytics
- IT and Database Support
- Microservices and API Development
- Business Process Management

Digital

- Experience Design
- Deployment and DevOps
- Emerging Technology Frameworks
  - Blockchain COE
  - AI Automation COE
  - InsurTech COE
  - RegTech COE
  - AI Data Science COE
  - Wealth Tech COE
  - Digital Ecosystems COE

Business Consulting

- Enterprise Strategy, Architecture and Transformation
- Client Experience and Lifecycle Management
- Data Science, Engineering and Governance
- Regulatory Change and Compliance
- Finance and Risk Transformation
- Innovation Management
- Program Management Services
Synechron’s Financial Innovation Labs (FinLabs) act as an innovation hub - allowing our clients to reap the benefits of Synechron’s digital R&D investment and scale transformative ideas with access to the brightest minds using cutting-edge technology. Synechron combines the ‘Power of 3’ - business process knowledge, digital design and core technology delivery excellence - to drive transformative solutions.

Here, clients can actually touch and feel the latest digital technologies and be energized and inspired to develop transformative solutions. Visitors can do everything from role-playing the customer journey through a typical digital engagement scenario in order to understand the impact of beacons, drones, biometric authentication and virtual reality, to prototyping around new technologies like Blockchain, Artificial Intelligence, InsurTech, RegTech and more.

The breakthrough technology solutions from Synechron’s FinLabs encompass the following:

- Blockchain
- Artificial Intelligence
- Automation
- InsurTech
- RegTech
- Artificial Intelligence Data Science
- Wealth Tech
- Digital Ecosystems

To know more about FinLabs, please scan the QR code.
Technology Capabilities

Data is the lifeblood of any financial organization. Through proven best practices and by embracing the latest innovations in Artificial Intelligence (AI), Blockchain, and user experience design, we enhance our clients’ ability to effectively and efficiently store, process, analyze, and act on their immense data potential. We have proven expertise and experience in data warehousing, BI, data lakes and large data computing tools.

Synechron provides IT infrastructure and database support for financial services firms. We work with clients on everything from application and performance monitoring to release change and management across a variety of technologies.

Synechron offers technology and strategic services related to business process management including implementation, BPM as a service drawing on our cloud expertise, validation and verification with our Quality Assurance (QA) capability, and environment consolidation. We also work with firms on process architecture, legacy modernization, business process competence centers and release management.

Synechron is one of the world’s leading systems integrators for specialist technology solutions, with dedicated Centers of Excellence (COEs) for Murex, Calypso, Finastra and Prima Solutions. Our COEs are known for world-class delivery and aggressive training programs for our consultants; for example, our Calypso Campus and Murex Academy. Our trained experts have experience across front and middle, back-office, risk and accounting applications across all asset classes.

We work with clients to enhance, restructure, migrate, and develop architectures to support their transformation and innovation initiatives. Our Cloud services include Software-as-a-Service, Platform-as-a-Service and, Internet-as-a-Service with large-scale enterprise strategy and migrations, developing and maintaining cloud-based infrastructure, and transitioning to serverless computing models.

A Microservices-based architecture introduces change that is often well-received by those creating modern applications seeking increased productivity and faster applications. We are working with clients to achieve the benefits of a microservices architecture, which includes increased deployability, reliability, availability, scalability, modifiability, and better DevOps alignment. We also are working with firms on their Omni-channel Application Programming Interface (API) strategies.

QA innovation must maintain pace to keep down costs, avoid bottlenecks, and uphold the industry’s minuscule margin of error. Through advanced methodologies and innovative approaches such as Combinatorics and Synechron’s SYNE Intelligent Process Automation testing tool, we can perform QA faster, more efficiently and effectively.

Synechron’s Technology Services

Technology Consulting
We have a strong team of financial services consultants who can tackle our clients’ toughest technology problems. Our technical business analysts understand complex business needs and create and implement practical Target State Architectures.

Application Development
We believe in developing applications that advance our clients’ digital strategies. We work with clients to build highly-customized applications and to shift their development practices to Agile. Our Application Development services includes Architecture & Design, Development, Performance Engineering, Maintenance & Production Support, and Migration & Application decommissioning.

Automation
We help deploy the latest evolutions in automation and provide end-to-end automation services, backed by our Robotic Process Automation (RPA). Our automation practice is made up of four primary service offerings: Consulting, Managed Services, Engineering Services and Syntario where we focus on Cognitive Robotic Process Automation (CRPA).

Data & Analytics
Data is the lifeblood of any financial organization. Through proven best practices and by embracing the latest innovations in Artificial Intelligence (AI), Blockchain, and user experience design, we enhance our clients’ ability to effectively and efficiently store, process, analyze, and act on their immense data potential. We have proven expertise and experience in data warehousing, BI, data lakes and large data computing tools.

IT and Database Support
Synechron provides IT infrastructure and database support for financial services firms. We work with clients on everything from application and performance monitoring to release change and management across a variety of technologies.

Microservices and API Development

Business Process Management
Synechron offers technology and strategic services related to business process management including implementation, BPM as a service drawing on our cloud expertise, validation and verification with our Quality Assurance (QA) capability, and environment consolidation. We also work with firms on process architecture, legacy modernization, business process competence centers and release management.

Enterprise Architecture & Cloud
We work with clients to enhance, restructure, migrate, and develop architectures to support their transformation and innovation initiatives. Our Cloud services include Software-as-a-Service, Platform-as-a-Service and, Internet-as-a-Service with large-scale enterprise strategy and migrations, developing and maintaining cloud-based infrastructure, and transitioning to serverless computing models.

Quality Assurance
QA innovation must maintain pace to keep down costs, avoid bottlenecks, and uphold the industry’s minuscule margin of error. Through advanced methodologies and innovative approaches such as Combinatorics and Synechron’s SYNE Intelligent Process Automation testing tool, we can perform QA faster, more efficiently and effectively.

Systems Integration
Synechron is one of the world’s leading systems integrators for specialist technology solutions, with dedicated Centers of Excellence (COEs) for Murex, Calypso, Finastra and Prima Solutions. Our COEs are known for world-class delivery and aggressive training programs for our consultants; for example, our Calypso Campus and Murex Academy. Our trained experts have experience across front and middle, back-office, risk and accounting applications across all asset classes.
We have experience in each of the business areas and building and maintaining the business systems that run these operations daily across Investment Banking, Retail Banking / Core Systems, Mortgage / Lending, Wealth Management, Asset Management, Corporate Banking, Cards and Payments, Infrastructure and Insurance.

We have run large-scale, global programs across front-, middle-, and back-office systems and are uniquely capable of understanding the broader impact of a change initiative and incorporating the needs and concerns of each business unit touched, resulting in an efficient, streamlined, and integrated solution.

We understand the unique business challenges and technology workflows that different business units within these organizations are facing and have experts across asset classes: Equities, FX, Fixed Income, Commodities, and Alternatives.

We are data experts, architects and analysts and take an enterprise approach to data including data governance, data analytics, data science, distributed ledger technology (DLT) and quantum computing.

We are solving our clients’ most complex engineering and enterprise-wide transformation challenges.

As a digitally-driven company, Synechron believes in developing applications that advance our clients’ digital strategies by contributing lean, future-proofed solutions that are compatible with their technology ecosystems. However, before a digital enterprise can be achieved, firms must transform their application development processes which in many cases will involve embracing Agile and DevOps.

We recognize that every firm is at a different place in their transformation process, which is why Synechron embraces Agility at the cornerstone of our consulting approach. With a diverse skillset, financial focus, and strategic approach, we can develop robust solutions for today while progressing enterprise strategies for tomorrow.

Our Development Approach
Our Application Development practice has extensive experience developing applications to deliver complex financial solutions within the restrictive scope of regulations, compliance and risk management. This financial-fluency allows Synechron to tackle complicated problems with lean, versatile, and communicative development teams. However, to adhere to our high development standards, Synechron employs a series of proven methodologies and best practices specifically designed to address both immediate needs and future considerations. We are systems agnostic and limit the use of toolkits during development in favor of developing light applications from the ground up. In doing so, we provide critical architectural solutions that aren’t tied down to specific technologies and for which technology stacks are kept up to date easily.

Agile & DevOps
At its core, a digital enterprise is rooted in a DevOps methodology, promising continuous integration and delivery, enabled by portable components, standardized code, interoperable applications, and a steady stream of updates to stay current. With each development initiative, Synechron works with clients to introduce increasingly Agile applications, thus laying the groundwork for enterprise DevOps and ultimately, a Digital enterprise.

Development Skillsets & Toolkits
Synechron is systems agnostic and offers full-stack development and consulting services for AngularJS, .NET and Oracle, has a Microsoft Application Development Gold Certification, and offers a full set of Java services including Technology Consulting, Application Development, Solutioning and Governance.

While we employ limited toolkits per project, we do have extensive experience and expertise across both major and niche development toolkits, many Agile and DevOps enabled, allowing us to work within our clients’ unique technology environments and reducing the need to add additional tools.
SPEED
The Structured Project Execution & Engineering Discipline (SPEED) is Synechron’s proprietary development framework to provide superior code quality, efficient delivery, and standardization across individual applications or enterprise initiatives. Applied to Engineering and the Systems Development Lifecycle (SDLC), SPEED focuses on four primary areas:

1. Guidelines and Best Practices
   Establishes standards to produce code that is clean, secure, defensive, efficient, and scalable. Review phases are used to fortify security, performance, scalability, reliability, supportability, and extensibility. Tasks are graded on importance and criticality, encouraging timely delivery, efficient resourcing, risk mitigation, enhanced documentation, and regular testing and analysis.

2. Metrics
   Using the Best Practices framework, projects are measured by both maturity and quality, factoring in variables such as project size, developer resources expended, and the amount and types of defects generated.

3. Reusable Assets, Templates & Artifacts
   To maintain consistency and compare disparate projects, refer to a series of reusable SDLC templates and checklists.

4. Standardized Components & Tools
   Strategically use vetted and pre-developed architectures, tools, components, and standardized platforms, while maintaining a robust code repository.

Our Application Service Offerings
Synechron’s Application Development practice works hand-in-hand with our other Technology Teams such as Quality Assurance (QA) and our leading Digital and Consulting experts to develop robust programs.

Our services include:
- Architecture & Design
- Development
- Performance Engineering
- Maintenance & Production Support
- Migration & Application Sunset / Decommissioning

DevOps
1. Continuous Integration
   Jenkins
   Travis CI
   Bazaar
   TeamCity

2. Integrated Test Automation, Selenium & cucumber

3. SGM tools - Github Bitbucket

4. Containerization using docker or rocket

5. Container orchestration using Kubernetes, StackStorm
Automation can not only be applied on processes that are repetitive, easily susceptible to error, rules-based, and/or time-sensitive but also on processes that require human judgement. A mature RPA approach implemented strategically not only contributes to cost-reduction but improves productivity because there are fewer human-errors and employees can have their time freed up to focus specifically on complex tasks that require human intervention and therefore, add more value.

The most mature companies are focused on mastering Cognitive RPA, which is considered the “future of RPA,” because it will allow the greatest level of cost savings, intelligence, and the most enhanced customer experience. Cognitive RPA leverages AI technologies including Computer Vision, Machine Learning and Natural Language Processing (NLP) to enable the processing of unstructured data, predictive and prescriptive analytics, and automation of tasks that involve judgement (where human interference is generally needed at this stage today). Essentially, this means a shift from going from automating processes using simple rules for sorting out data and replicating human decision-making on more complex cases.

Synechron has developed Six Core Selection Criteria Measures to strategically prioritize automation efforts.

1. **Stability:**
   - How repetitive is the process and how predictable are the outcomes? What are the frequency of changes to the process and underlying applications?

2. **Complexity:**
   - Are there security and encryption measures to consider? How many integration points are there?

3. **Human Factor:**
   - Is the process rule-based or require human judgement? Does the process require manual intervention?

4. **Business Priority:**
   - What is the impact of the process on day-to-day business?

5. **Effort:**
   - What is the volume of data? What is required to make the automation adhere to compliance standards? Does it require a GUI or batch processing?

6. **Cost:**
   - What would it cost to implement?

Synechron works with clients to create a process map that outlines all initiatives being considered for automation and grades them across the six criteria, assigning criteria weighted scores based on stakeholder success metrics. These scores then are applied to the graded criteria to generate single priority scores for each individual process and formalize an action plan.

As financial firms increase their dependency on rapidly-evolving technologies, Quality Assurance (QA) innovation must maintain pace to keep down costs, avoid bottlenecks, and uphold the industry’s miniscule margin of error. Additionally, efficient and reliable automated QA tools such as Selenium, HP – UFT formerly QTP, TestComplete, JIRA, IBM Rational, LISA, Telerik, Appium, JUnit, SoapUI and many has become a necessity as firms transition from Waterfall to Agile and DevOps methodologies. Through Synechron’s advanced methodologies and innovative proprietary tools, QA can be performed faster, cheaper, and more effectively than ever.

When effectively implemented, Test Automation is an essential component of any development cycle. However, improperly implemented, automation can be inefficient, costly, lack thoroughness, and without regular maintenance can rapidly become ineffective. Synechron’s QA practice works with clients to answer critical questions such as What to Test, How Much to Test, and What to Automate.
How to Approach a Cloud Project

There will be multiple business drivers that will require Cloud adoption, but whether cloud is a solution to an initiative or the initiative itself, it is critical to approach adoption strategically and develop an enterprise view.

Synchro has a proven methodology that addresses how to:

1. Align Cloud Strategy with Appropriate Business Drivers:
   - Identify your business objectives, assess your current processes, and define the use case. Are you looking to cut costs or enable technology innovation? Is there a business process that needs to be improved or a regulation that needs to be implemented? Every process must start by taking a step back to articulate the problem we are trying to solve.

2. Define Your Requirements:
   - Ask yourself, is cloud the solution, or just one component of the solution? Establishing a controlled project is a critical step to maximize your resource expenditures and lay a strong foundation for your project roadmap. For some, cloud adoption is best implemented through a series of manageable, controlled POCs, delivering benefits and creating a roadmap to scale. Migrating to the cloud might incorporate other existing projects such as data normalization or fulfilling regulatory requirements.

3. Determine the Technology:
   - Once scope and objectives are fully formed, the technology components of the solution need to be defined.

   **Phase 1: Determine Your Technology Ecosystem**
   - Determine what will be hosted on premises as opposed to a public cloud. Decide if multiple IaaS vendors and solution sets will be involved. Evaluation may determine that a hybrid cloud approach as well as a hybrid vendor approach will create an ecosystem best equipped to deliver your cloud requirements.

   **Phase 2: Determine Your Technology Portfolio**
   - With the core ecosystem in place, map out the solutions architecture. Identify which vendor toolkits and components are best and how they will interact. Consider how the project teams will be structured and what expertise is needed for each of the solution areas.

4. Run a Cost Benefit Analysis:
   - Performing a systematic and thorough evaluation of the solution benefits and associated costs is a critical step. However, when initiating a large-scale paradigm shift, it can become exceedingly complex. Without measures for ongoing cost/benefit management, the initial vision can be missed and the benefits lost amid escalating costs. Transitioning from on-premises hardware to the ultimate flexibility of a public cloud provider can create a complicated (albeit often desirable) shift in reclassifying business expenses from Capital Expenditures (CapEx) to Operating Expenses (OpEx). Striking a strategic balance while considering the complexity of the business and technology factors requires deep expertise.

5. Create an Implementation Strategy:
   - As you evaluate your use case and develop an implementation strategy, there are important considerations to be made regarding infrastructure, deployment, and delivery. Identify the right mix of technologies for your strategy early, as they will directly influence your evaluation of technology needs and play a significant part in your deployment strategy.
   - Determining your cloud hosting strategy will be largely dictated by identifying the primary service category for your applications.

   **Infrastructure as a Service (IaaS):**
   - The hardware and software that powers your cloud. Hosting options include both Public and Private Cloud options; however, there are benefits of taking a Hybrid Cloud approach, which is the preferred solution for firms looking to both cut costs while retaining maximum visibility into their more protected assets.

   **Software as a Service (SaaS):**
   - Applications designed for end-users, delivered over the web without requiring a download. Typically hosted on a Public Cloud.

   The next phase will dive deeper into the technological considerations necessary for the implementation/migration stage, and involve using best practices to ensure that the project hits the ground running.

Technology Capabilities

We can provide an end to end partnership for the Cloud onboarding journey and in the process not only deliver the technology solutions, but also enable the IT Service Management (ITSM) processes and establish a DevOps culture.

**Technology Solutions**

**Rapid Application Development using SaaS and PaaS**

Organizations can take rapid advantage of the Cloud by migrating their ITSM, Customer Relationship Management (CRM), and other Operational Systems to SaaS-based solutions. Our experience includes Vertical SaaS, Horizontal SaaS, Open API Integration and Data Migration. Additionally, there are significant benefits to be had by simplifying IT operations. Organizations can achieve this by relying on cloud-provided managed services and delegating the operational management tasks, instead focusing efforts on building business capabilities. PaaS solutions provide ready-to-use applications which can be used to quickly build enterprise scale applications which allow for customizations to tailor the solution as per business needs. We have experience across multiple application management platforms, database services, API management solutions, and cloud-based contact center platforms.

**Infrastructure Services**

These include several short-term and long-term solutions that the Enterprise could benefit from: DevOps and SysOps being the focal of infrastructure solutions.

There is an array of DevOps tools available to implement automation at various levels of the life cycle. It is important for organizations to impress these tools and platforms in the culture and the day-to-day life cycle to get maximum adoption and benefits. Our experience with DevOps and SysOps can help accelerate the decision making on the tools suitable to the ecosystem and help maximize the adoption and continuous improvement. Some of the other Infrastructure solutions include Disaster Recovery & Containerization. While Cloud-based DR can help enterprises realize cost-benefits, Containerization can help migrate legacy applications, without having to invest in re-engineering.

**Application Migration**

In order to maximize the benefit of migrating applications to the Cloud, enterprises need to evaluate between “Lift and Shift” and “Shift and Adopt.”

A Lift and Shift strategy is most logical for legacy applications with low ROI on re-engineering but high ROI for infrastructure, maintenance and support. Our experience with DevOps, SysOps and Containerization can accelerate the process of such migrations.

A Lift and Shift implementation requires a high degree of re-engineering and is best implemented in a phased manner. This would also involve careful consideration for Hybrid solutions and data exchange with other enterprise systems.

**Phase 1:** Configure the applications to use the Cloud infrastructure for “burst” scenarios.

**Phase 2:** Identify isolated components in the application architecture and replace with Cloud Services (ex: Data Security, 3rd Party Integration APIs).

**Phase 3:** Migrate the User Interface.

**Phase 4:** Migration of Business Logic and Data would involve further evaluation for Hybrid solutions, depending on Security and Performance considerations.

Our experience with multiple cloud providers, UI frameworks, Microservices and data integration can help organizations with the end to end journey and manage risks at an early stage of the project.

Synchro has an Amazon Web Services (AWS) Partnership at the Advanced Level, and also has achieved the Microsoft Technology Cloud Platform Competency, allowing us to advise clients on either platform and the required approach.
Calypso
Calypso is a leading provider of front-to-back technology solutions for the financial markets. It has over 18 years of experience in delivering cross-asset solutions for trading, processing, risk management and accounting. Calypso is used by over 3,000 market professionals in over 60 countries. As a Certified Solutions Partner since 2006, Synechron houses more than 100+ Calypso experts who can help clients manage, integrate, support and accomplish version upgrade projects for the Calypso solution suite. Synechron’s Calypso Center of Excellence gathers and reinforces its Calypso skills, respond to tenders efficiently and propose new managed services offerings to its clients.

Murex
As an Alliance Partner of Murex, Synechron employs highly skilled Murex experts with experience in various versions of the product and all phases of the project life cycle, i.e. study, implementation, development and support. Synechron was the first company to sign the Global Relation Agreement with Murex. Since its inception in 1986, Murex has played a major role in proposing effective technology as a catalyst for growth and innovation in capital markets. It has devoted nearly 30 years to the design, implementation, and evolution of integrated trading, risk management, processing, and post-trade solutions. Synechron draws on its Murex Center of Excellence to gather and reinforce its Murex skills, respond to tenders efficiently and proposes new managed services offerings to its clients.

Prima Solutions
As a partner, Synechron shares its expertise with Prima Solutions for the implementation of Prima Insure™ which is fully web modular, multilingual and available in SaaS mode, that covers the whole life cycle of an Insurance policy - distribution, underwriting, contract claims and financial management.

Finastra
Founded in 2017 by the combination of Misys and D+H, Finastra provides the broadest portfolio of financial services software in the world today - spanning retail banking, transaction banking, lending, and treasury and capital markets. As a Finastra Premier Select Partner since June 2017 (Fusion Capital and Fusion Banking), Synechron helps deliver solutions which enable customers to deploy mission critical technology on premise or in the cloud. Finastra’s scale and geographical reach means that they can serve customers effectively, regardless of their size or geographic location—from global financial institutions, to community banks and credit unions. Through Finastra’s secure and reliable solutions, customers are empowered to accelerate growth, optimize cost, mitigate risk and continually evolve to meet the changing needs of their customers. 48 of the world’s top 50 banks use Finastra technology.

Synechron applies its global network of product-specific expertise to deliver front and middle, back-office, risk and accounting applications across all asset classes. We have expertise in Charles River, SEI and Oracle Flexcube platforms and many more.
Synechron offers end-to-end data services, which include data management and strategy, technical delivery of data infrastructure and applications, and data innovation and visualization. Through proven best practices and by embracing the latest innovations in Artificial Intelligence (AI) and Blockchain, and user experience design, we enhance our clients' ability to effectively and efficiently store, process, analyze, and act on their immense data potential.

**Business Consulting & Strategy**

Synechron Business Consulting offers extensive experience in Master Data Management and Metadata Management, including strategy, road mapping, gap analysis, project management and designing federated data models to establish effective, enterprise-wide Data Governance and Data Management systems, all the while enhancing data privacy requirements such as GDPR and PSD II and related cyber and security requirements. We have a proven track record designing strategic, practical, organizational and technological data programs based on our expert knowledge of risk and regulations, both regional and global, including MiFID II, Basel III, and many more.

**Technology Development**

We help financial services firms take their business decisions and execute actionable technology solutions. Synechron’s technology practice can map data lineage, unite and normalize siloed data through data lakes, deliver cloud strategy and migration programs, develop data security infrastructures, and employ the most advanced ETL tools to maximize data process efficiency. We also help our clients to prioritize data storage and architecture from relational databases to traditional database alternatives such as NoSQL, virtualized/federated databases, columnar database and in-memory databases.

**Digital Innovation**

As the financial data ecosystem has exploded, digital innovation enables firms to maximize the product of that data. Synechron is at the forefront of digital innovation in financial services. Through emerging technologies such as AI, structured data can be extracted from unstructured sources, analysts can be enhanced and automated, and data and executions can be shared, logged, automated and executed securely. By using Blockchain, we are leading the industry in using Distributed Ledger Technology (DLT) and smart contracts to build trust across networks and to create a golden source of data while eliminating reconciliation. We also use Design Thinking and Experience Design to create intuitive, engaging and streamlined workflows and User Interfaces (UIs) that enhance data visualization.

**ETL**

Employing expert knowledge across the most advanced ETL tools available to offer an efficient and thorough ETL process. Seamlessly integrates with governance, data strategies and metadata management to maximize data quality and usability. Such tools include:

- Ab Initio
- DataStage
- MSBI
- Informatica
- Pentaho
- BDDS

**Blockchain**

Take a decentralized approach to data with enhanced security and data quality through Blockchain. Our Blockchain Center of Excellence (CoE) developed six Accelerators for real business use cases, including Trade Finance, KYC, Mortgage Financing, and more. Our platform expertise includes:

- Ethereum
- Quorum
- Corda
- Hyperledger Fabric
- Ripple

**Data Storage & Architecture Methodologies**

Determine the best data storage methodology and build the solution best suited for the specific need. Such methodologies include:

- Data Modeling
- Data Lakes
- Data Warehouses
- Data Rivers
- Data Virtualization
- Relational Databases
- NoSQL

**Design Thinking and Experience Design**

Gain an improved understanding of the data available, improve reporting and draw more meaningful insights through custom data visualization and UI development. Services include:

- Experience Design
- Design Thinking
- UI/UX Design
- Dashboard Design
- Mobile/Multichannel Development
- Data Visualization
- Websites / Portals

**Big Data**

Strategically integrate Big Data using NoSQL, distributed computing and data warehouse appliances. Synechron has experience building the infrastructure and the expertise with key tools empowering clients to take a proactive approach to Big Data. Such tools include:

- Apache Mahout
- Apache HBase
- Hive
- MongoDB
- Cassandra
- RavenDB
- Netezza
- Teradata
- Tableau
- Qlik
- Kibana

**Cloud**

Use the cloud for data storage, analytics, virtualization, disaster recovery and more in a public, private or hybrid cloud. Synechron has extensive experience in cloud technology including:

- Cloud Migration
- Developing and implementing PaaS, IaaS, SaaS and IaaS+ solutions
- Cloud Privacy and Security
- Build API Gateways
- Containerization

**Capabilities include:**

**Data Management & Governance**

Manage your data environment more efficiently, integrate data processes, and unlock the potential within your data. Services include:

- Enterprise Data Architecture Strategy and Development
- Data Integration
- Federated Data Architecture
- Data Quality Audits
- Premium Terminal Optimization
- Market Data Optimization
- Master Data Management
- Meta Data Management
- Data Lineage

**Reporting & Analytics**

Reduce risk, adhere to compliance and regulatory requirements and develop analytics to empower clients to make critical decisions concerning revenue, sales, risk, profits and more. Services include:

- Develop reporting and analytics platforms
- Building Dashboards & Scorecards
- Cloud Privacy and Security
- Microstrategy
- Data Mining
- Tool Stack Expertise (MSBI, BO, Cognos, Pentaho, more)
- Data Cubes
- Portal Development and Integration
- Key tools include Xcalar, Spark, R/\ and storm

**AI Automation and Data Science**

Use automation and AI to improve data quality, reduce manual workload, improve speed and efficiency, and power advanced analytics. Techniques and Tools include:

- Natural Language Processing
- Robotic Process Automation
- Cognitive Machine Learning
- Data Science
- Chatbots
- Robo-Advisors
- Syntel
- Automation Anywhere
- Blue Prism
- UI Path

**Data ingestion tools**

- Data Ingestion
- Storage, and Methodologies and list Kafka
- Apache Flume
- Snoop
- Amazon Kinesis
- Apache NiFi

www.synechron.com
Synechron provides IT infrastructure and database support for financial services firms including database operations support, service desk operations, storage and backup support, network and IT security operations support, and ETL environmental support. We work with clients on everything from application and performance monitoring to release change and management across a variety of technologies.

We deliver L1, L2, L3 Database server support including SQL Server, Oracle and Greenplum; L1 support for all desktop issues and software installs. For Storage and Backup Support, we excel at disaster recovery and business continuity planning and equipment operation, utilization, and load balancing. We also provide remote infrastructure management and network and IT security operations support related to equipment operation and utilization, load balancing and redundancy.

A Microservices-based architecture introduces change that is often well-received by those creating modern applications seeking increased productivity and faster applications.

We take a best practice approach focused on integration into DevOps practices / managing the lifecycle of each service, development team alignment to build capabilities with a product mentality, Open API Gateway Patterns and a Service Mesh for Service Discovery, and a containerization strategy to have stable and predictable deployments. We are working with clients to achieve the benefits which include:

- **Deployability** — increased agility to roll out new versions of a service due to shorter build, test and deploy cycles. This enables implementation of service, security, replication, persistence, and monitoring configurations.
- **Reliability** — a fault with a microservices-only approach is that it only affects that microservice and its customers, unlike faults cascading through in monolithic applications.
- **Availability** — higher availability for the services that are not undergoing change.
- **Scalability** — Microservices can be scaled independently using pools, clusters, and grids, making the approach a great match for cloud elasticity.
- **Modifiability** — Microservices offer the flexibility to consume new frameworks, libraries, data sources, and other resources.

We also are working with firms on their Omni-channel Application Programming Interface (API) strategies to support their microservices architecture ambitions.
Synechron offers strategic technology services for BMP including implementation, cloud, QA and environment consolidation. We draw on our expertise as technology architects and in legacy modernization to help clients build and maintain their BPM Centers of Excellence (COE).

Synechron has a longstanding Pega partnership and is an expert in Pega-related technology platforms and frameworks with proven expertise on implementations in the financial services industry in architecture assessment, upgrades, and migrations.

In terms of Business Process Outsourcing, we work with firms on a variety of policy admin systems, digital document repositories, claims adjudication systems, OCR systems, to run KPO and BPO services.

Case Studies

Enterprise Cloud Migration

Bringing all businesses apps into the Cloud for a Global Tier-One Bank

The Project

Synechron was selected by a global, tier-one investment bank to facilitate an Enterprise Cloud Migration of over 1,500 applications to a private cloud to deliver them as a Platform as a Service (PaaS). The migration was motivated by three primary objectives – cost-cutting, enterprise-wide technical upgrades, and Safety and Soundness.

The bank wanted to migrate to pay-as-you-go servers off-premises, to drastically reduce datacenter overhead and maintenance costs associated with high-capacity 24/7 business and enable dynamic provisioning and resource pooling. This would allow them to pay for resources as expended as opposed to continuously running servers to handle peak loads, significantly lowering operational costs across the infrastructure and future applications.

In order to achieve an enterprise-wide technology upgrade, the company then would need to migrate its applications onto the cloud through a strategic and phased delivery approach to fit the broad needs of the bank’s many financial units while delivering an enterprise-wide upgrade.

Finally, improved security was a key criteria. The cloud which would need to bring together out-of-the-box security features as well as re-enforced security measures like data encryption. Safety and Soundness would need to be performed across all applications, requiring a deep understanding of financial services business operations, compliance risks and potential security threats.

The Process

Cloud Provider Vendor Analysis

Before any significant project mapping could begin, we needed to select the cloud provider best suited for the unique demands of the financial services industry and the project’s requirements. We selected Microsoft Azure for 3 primary reasons:

1. PaaS:
   At the time of the analysis, Microsoft Azure immediately stood out as the best platform, with not being a natural fit for the PaaS model

2. Compliance:
   Azure has a number of built-in compliance offerings to address a growing list of financial regulations and a commitment to the General Data Protection Regulation (GDPR) that when combined with our client’s proprietary security and compliance measures, would create a stronger overall infrastructure

3. Service:
   Microsoft Azure offered greater assurances that it would provide reliable service, continued development of the cloud technology, and most importantly, could be entrusted to securely host our client’s data

We then needed to develop application analysis protocol including a thorough review of each application, beginning with a high-level code analysis, then drilling down to a line by line code analysis in order to identify the remediation point. Using Microsoft’s NDepend, the code is then assessed for quality and maximum compatibility. Lastly, the application is assigned a classification of either PaaS or IaaS. It is during this process that these applications undergo a Safety and Soundness examination, unsupported components are upgraded to cloud-tech and applications are encrypted for maximum security.

Application Analysis

We then analyzed and mapped internal and external dependencies, third-party services, unmanaged code, external libraries and an exhaustive list of all other variables. Once completed, we developed our migration plan.
Three Phases of Migration

Phase 1:
To initiate the migration, we worked with our client to select 10 low-risk, non-business essential apps. This was treated as a testing phase to establish process. After these 10 apps were successfully migrated and our process was tuned, we then proceeded to migrate the remaining non-business essential applications.

Phase 2:
The second stage of migration consisted of more complex apps that may handle more confidential data and require higher security measures. With our processes in place, an aggressive migration goal of 200 apps per quarter was established.

Phase 3:
Our final stage will consist of the more technically complex, business-critical applications. With these apps, reliability is paramount and testing before activation is crucial. Due to the “pay as you go” cost structure and dynamic provisioning inherent to the cloud, we will be able to extensively test these apps without having to divert resources from other apps and without having to procure additional hardware. When the migration is complete, we will have seamlessly transitioned over 1500 fully functional applications to the cloud, without interrupting service.

The Results
While the project is ongoing, early returns indicate considerable ROI. The Safety and Soundness initiative has successfully upgraded security and enhanced application compliance. With a strong strategy in place, we’ve reliably hit our 200 apps per quarter goal and all the target KPIs, including:
• Reduction of on-site hardware and processing demands
• Enhanced security
• Improved performance and efficiency from cloud based apps
• Assured compliance

Case Studies

IMA Extraction & Automated Code Generation
Global Investment Manager

Objective
• A leading global investment manager wanted to enhance its Investment Management Agreement (IMA) documentation process.
• The client used a proprietary platform to automate compliance checking and guideline administration. IMA documents were manually assessed line-by-line and hand-coded into the platform. With thousands of documents to assess, the process became costly, time-consuming, and error-prone.
• The client sought to automate the analysis and code generation of IMA documentation.

Solution
• Synechron delivered a 4-week Proof of Concept (POC) to prove that through advanced AI and Machine Learning, accurate assessments and robust code generation for IMA documents could be automated.
• Unstructured PDF and XLS IMS files were digitized with Optical Character Recognition (OCR). Natural Language Processing (NLP) was used to read the files, extract the intent, and auto-generate rules to be input into the compliance platform.
• Once trained, the POC successfully processed documents and auto-generated rules matching the documents’ manual assessments.
• A roadmap was developed to extend the POC into a broader, end-to-end business processing engine.

Benefits
• Automated processing of investment guidelines
• Automated rule generation
• Increased efficiency and reduced errors to enhance downstream surveillance and compliance
• Value-added intelligence due to enhanced data processes
Case Studies

Technology Services to gain increased control over the client’s business.

Cross-asset Liquidity Risk Platform
Focused on data storage across commodity machines using:
- Hadoop Distributed Filing System for maximum fault tolerance and efficiency
- Scale-based Spark framework due to the rich implementation of clustering and parallel compute algorithms in its Machine Learning library to achieve real-time scoring.

Omni-channel API using Microservices
Synechron was approached by a leading insurance provider to create an Omni-channel Customer Experience. Synechron would integrate three primary technologies, Microservices Architecture, Containerization and Cloud Computing.

MiFID II and EMIR Regulatory Reporting & Publishing
Synechron drew upon its financial services expertise and deep knowledge of MiFID II / EMIR regulations to formulate a strategic approach to testing and development. Synechron employed agile development methodology and an iterative QA and development approach.

Rationalizing and evolving the maintenance of a Calypso system
Crédit Agricole - Corporate & Investment Banking is France’s largest bank and one of the largest in the world in terms of capital. Our objective was to deploy and maintain all Calypso environments with one dedicated service center team to manage four systems. This enormous undertaking allowed us to build an entire service center around Calypso for business analysis, architecture and development.

A massive migration of the Murex kind
The EDF group is a leading European energy provider and a key player in France. We were tasked with switching over the Finance Division’s IT system from Murex 2.10 to Murex 3.1, in addition to configuring the front-to-back, risk and accounting modules. We partnered with Murex and managed the re-implementation by validating business specifications using the MiXpress methodology. Synechron SI team successfully delivered smooth integration of thousands of financial transactions, keeping IT cost minimal, configuration of MX modules and upstream & downstream interfaces.

Key Delivery Locations

Multi-location engagement delivers best skills/cost mix on a sustainable basis

New York, USA
- Located in Times Square, in the heart of NYC and close to our Tier 1 clients
- 70+ employees working from our global HQ
- 250+ employees in the tri-state area
- Working with top 4 / 5 Investment Banks
- Around 100 employees in Nashville, TN
- A cutting-edge Synechron FinLab showcasing Innovations in Blockchain, AI and more
- Architecture consulting practice
- Seasoned delivery management

Charlotte, USA
- 500+ consultants spread across charlotte region
- Dedicated Associate Development Program (ADP) with collaboration with 8 universities
- Availability of Domain specialists with Tech-Func-Functional expertise across trade life cycle
- Synechron works with Tier 1 Banks and Asset Management firms within this region
- FinLabs centre with focus on innovation

Fort Lauderdale, USA
- Dedicated Associate Development Program (ADP) to hire talent available from universities such as Broward, Florida State University, FIU, Rutgers, Miami, etc.
- Successfully trained and deployed many developers for large investment banks
- Retail banking and insurance clients
- Low-cost development centre
- Synechron FinLabs to accelerate digital innovation projects

London, UK
- Synechron’s London office is based in central London within walkable distance from major tube stations
- 150+ seat development centre
- Boardroom with video conference facilities for daily huddles
- Matured “Power of 3” offering supporting client needs across Digital, Business Consulting and Technology Consulting
- Provision to create a secured project area
- A cutting-edge Synechron FinLab showcasing Innovations in Blockchain, AI and more

London, UK
- Multi-location engagement delivers best skills/cost mix on a sustainable basis

Synechron’s London office is based in central London within walkable distance from major tube stations
- 150+ seat development centre
- Boardroom with video conference facilities for daily huddles
- Matured “Power of 3” offering supporting client needs across Digital, Business Consulting and Technology Consulting
- Provision to create a secured project area
- A cutting-edge Synechron FinLab showcasing Innovations in Blockchain, AI and more

Synechron’s London office is based in central London within walkable distance from major tube stations
- 150+ seat development centre
- Boardroom with video conference facilities for daily huddles
- Matured “Power of 3” offering supporting client needs across Digital, Business Consulting and Technology Consulting
- Provision to create a secured project area
- A cutting-edge Synechron FinLab showcasing Innovations in Blockchain, AI and more
Technology Capabilities

Pune / Mumbai / Bengaluru / Hyderabad / Chennai - India

- 100+ consultants
- A maturing and growing Business Consulting Offering, developing Technology and Digital capabilities in own location
- Synechron works with Tier 1 Banks, Asset Managers and Insurance companies within this region
- Comprehensive training budget, focusing on skills, content knowledge and personal development
- A flat and approachable organization
- A cutting-edge Synechron FinLabs at Pune, Bengaluru and Hyderabad showcasing Innovations in Blockchain, AI, RegTech, Wealth Tech and more
- Dedicated Delivery Management structure ensures the team operates as a global "virtual team"
- 4000+ strong cross-asset capital markets practice across India locations
- Account based Training / University model for effective skill building
- Secure facilities with both logical & physical project segregation
- Growth planned from 6,000 FTE to 10,000
- A cutting-edge Synechron FinLabs at Pune, Bengaluru and Hyderabad showcasing Innovations in Blockchain, AI, RegTech, Wealth Tech and more

Amsterdam, The Netherlands

- 100+ consultants
- Matured and growing Business Consulting Offering, developing Technology and Digital capabilities in own location
- Synechron works with Tier 1 Banks, Asset Managers and Insurance companies within this region
- Comprehensive training budget, focusing on skills, content knowledge and personal development
- A brand new office in the middle of all the big banks in Amsterdam
- A flat and approachable organization
- FinLabs center with focus on innovation
- Synechron has strengthened its expertise across verticals to ensure it has experience in the most cutting-edge technologies and platforms. We Partner with Leaders, to Lead the Industry.
- Partnerships

Novi Sad, Serbia

- 200+ employees in Novi Sad
- Projected growth to 500 employees in the next 2 yrs
- Synechron innovation projects being executed from Serbia
- Local Centre of Excellence on Full Stack Java with
  - Full Stack Java with
    - .net Angular / ReactJS
  - AI / Machine Learning
- Data Science
- Innovation focused and strong delivery capabilities development centre
- Successfully trained and deployed 130+ developers for large financial services clients.
- Strong capabilities in Systems Integration (30+ Experts in Calypso and Murex)
- Data Engineering capabilities (10+ experts on Hadoop, Scala / Spark)
- 200+ employees in Novi Sad
- Projected growth to 500 employees in the next 2 yrs
- Synechron innovation projects being executed from Serbia
- Local Centre of Excellence on Full Stack Java with
  - Full Stack Java with
    - .net Angular / ReactJS
  - AI / Machine Learning
- Data Science
- Innovation focused and strong delivery capabilities development centre
- Successfully trained and deployed 130+ developers for large financial services clients.
- Strong capabilities in Systems Integration (30+ Experts in Calypso and Murex)
- Data Engineering capabilities (10+ experts on Hadoop, Scala / Spark)

Paris, France

- 150+ consultants
- A brand new office based near the Champs-Élysées
- Finlabs center with the latest developments in financial technology
- SI practice with 4 Centers of Excellence (Calypso, Finastra, Murex, Prima Solutions)
- Strong relationship with our European Delivery Center in Novi Sad (Serbia)
- Personalized monitoring of skills development (technical/functional trainings: Calypso Campus, Murex Academy, Finastra University and Prima Boot Camp)
- Primary clientele are French investment banks and financial services clients using partner technologies

Partnerships

Throughout its growth story, Synechron has strengthened its expertise across verticals to ensure it has experience in the most cutting-edge technologies and platforms. We Partner with Leaders, to Lead the Industry.

Innovation Partners

- ... (List of innovation partners)

Systems Integration Partners

- ... (List of systems integration partners)

Technology Partners

- ... (List of technology partners)
Awards and accolades

Prestigious laurels for Synechron innovation work

Synechron recently launched Digital ecosystem accelerators for the Financial Services Industry wins the Big Innovation Awards 2020.

Synechron’s AI Data Science accelerators win the Business Intelligence Big Innovation Awards 2019.

Synechron’s AI Data Science Team won the Tech Innovator of the year-Services Awards 2019.

Synechron co-founder and CEO, Faisal Husain wins the FinTech Person of the Year and Synechron’s blockchain accelerators win the best distributed ledger technology (DLT) initiative of the year by FTF News.

Synechron’s self-sovereign KYC LEIA2 DLT project with R3 wins 2018 Best in Blockchain award.

The Synechron team receives 3rd place at the Blockchain Virtual GovHack - 2017, the biggest ever international hackathon on blockchain organized by the UAE government.

Synechron wins the 2017 Happy at Work award.

Synechron listed in the Inc. 5000 as one of the fastest-growing private companies in the US for the fifth time.

Prestigious corporate awards & recognition

Synechron UK has been recognized as a finalist in the British Bank Awards 2020 in the “Consultancy of the Year” category.

Finalists for the 2020 UK FinTech Awards as Team of the Year for our work on the LIBOR accelerator and Rising Star for our employee excellence.

2019 and 2020 We Are The City Rising Star Awards winners and finalists in the insurance, technology and gender equality categories.

Synechron has been recognized as a great place to work 2019 & 2017-best workplaces in the Netherlands.

Best places to work award for three consecutive years-2020, 2019 & 2018.

Synechron wins the 2018 Best Case Study Award by ACORD for insurance blockchain accelerator.

Synechron FinLabs featured in the top 28 fintech and insurtech innovation labs in Singapore.

Synechron wins in the CB Insights 30 Corporate Innovation Labs In Finance.

Synechron CEO & Co-founder Faisal Husain wins the 2018 Entrepreneur of the Year award.

Hareesha Pattaje, Managing Director - Technology and Country Head - India at Synechron wins the Prestigious CIO100 FutureTech Leader Award 2018.

Umesh Bhapkar – Head of IT at Synechron wins the Innovative CIO Awards 2018.

Synechron wins the 2018 Best innovation award.

Synechron’s Blockchain Accelerators win two awards - Best Distributed-Ledger technology and Best use of the Agile methodology.

Synechron’s recently launched Digital Ecosystem accelerators for the Financial Services Industry wins the Big Innovation Awards 2020.

Synechron wins Mobile Star Awards 2017 for best Auto application 'DRIVE'.

Synechron wins the ACORD Innovation award at ACORD 2017 for Visual Risk Accelerator and at ACORD 2016 for Blockchain and Mypossessions App.

Synechron is featured in the 2018 50 Best Workplaces of the Year in US.

Synechron wins the 2017 Happy at Work award.

Synechron listed in the Inc. 5000 as one of the fastest-growing private companies in the US for the fifth time.

Synechron is shortlisted for FSTech Awards 2018 for best use of Mobile.

Synechron wins the 2017 Happy at Work award.

Synechron wins the 2017 Happy at Work award.

Synechron has been recognized as a great place to work 2019 & 2017-best workplaces in the Netherlands.

Best places to work award for three consecutive years-2020, 2019 & 2018.

Synechron wins the 2018 Best Case Study Award by ACORD for insurance blockchain accelerator.

Synechron FinLabs featured in the top 28 fintech and insurtech innovation labs in Singapore.

Synechron wins in the CB Insights 30 Corporate Innovation Labs In Finance.

Synechron CEO & Co-founder Faisal Husain wins the 2018 Entrepreneur of the Year award.

Hareesha Pattaje, Managing Director - Technology and Country Head - India at Synechron wins the Prestigious CIO100 FutureTech Leader Award 2018.

Umesh Bhapkar – Head of IT at Synechron wins the Innovative CIO Awards 2018.

Synechron wins the 2018 Best innovation award.

Synechron’s Blockchain Accelerators win two awards - Best Distributed-Ledger technology and Best use of the Agile methodology.

Synechron’s recently launched Digital Ecosystem accelerators for the Financial Services Industry wins the Big Innovation Awards 2020.

Synechron wins Mobile Star Awards 2017 for best Auto application 'DRIVE'.

Synechron wins the ACORD Innovation award at ACORD 2017 for Visual Risk Accelerator and at ACORD 2016 for Blockchain and Mypossessions App.

Synechron is featured in the 2018 50 Best Workplaces of the Year in US.

Synechron listed in the Inc. 5000 as one of the fastest-growing private companies in the US for the fifth time.