

*Synechron*

# CTO Trends Outlook 2022: The Need for Speed

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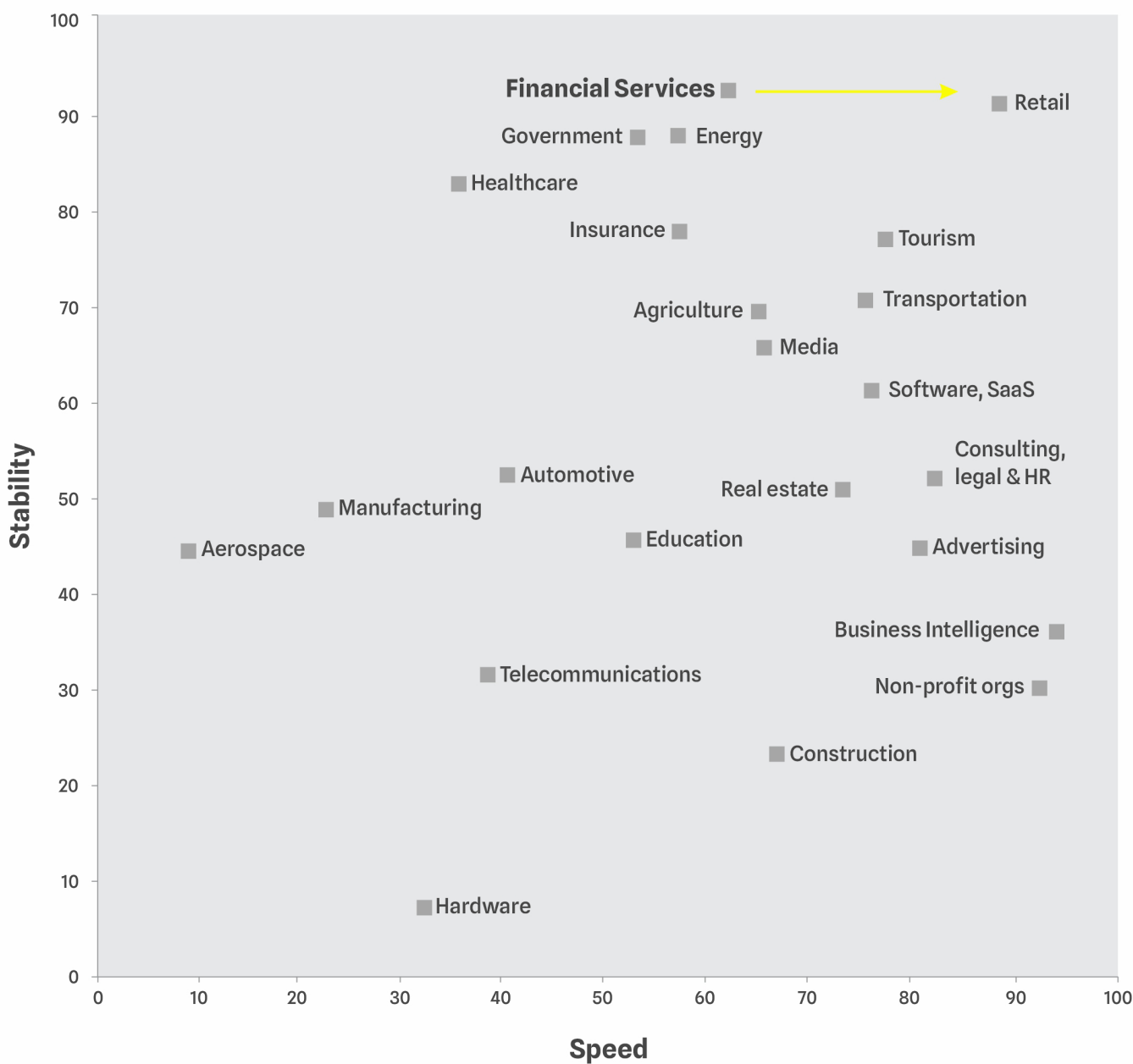
## Your **Critical Role**



As a leader at a financial services and insurance firm, you are always looking at the world around you as well as assessing others in your industry. Your role is to determine where technology updates, improvements and enhancements should be made to give you the biggest benefit for your investment, improve operations, heighten overall security and stay current against competitors.

As we head deeper into 2022, the need for speed is a primary objective and a megatrend. Financial services firms must stay relevant in a continuously changing world. This has driven the digital transformation imperative to the top of the 'To Do' list as leaders realize the critical need to innovate and deliver new features faster, while ensuring that systems are reliable and secure.

## Software Delivery performance by industry // a measure of success in digital transformation



Source: CD Foundation state of continuous delivery report 2021

# Progress for the **Financial Services Industry**



**The Continuous Delivery Foundation** -- in a June 2021 analysis of software delivery performance across multiple industries – found that the Financial Services industry is a top performer for achieving stability, but found it to be in the middle of the pack for its speed of software delivery. Software delivery performance, which includes achieving both speed and stability, is considered as a measure of success for digital transformation. Not surprisingly, the Retail sector is far ahead of most industries for both digital transformation measures – stability and speed. Of note, the Insurance industry as a whole is a bit further ahead in the digital transformation race based upon speed, but lags behind the broad Financial Services industry in terms of achieving stability. This leaves a great deal of room for improvement.

# The Foundation for **Successful Digital Transformation**



In order for a financial services organization to successfully undergo its own digital transformation, we believe the proper foundation requires leadership, strategy and architecture. Buy-in at the highest levels must be genuine, followed by the development of an overall strategy to achieve specific objectives, and the subsequent implementation of the optimal architecture to solve the articulated needs:



Leadership



Strategy



Architecture

# 2022 Trending Themes

At Synechron, we have identified eight key 2022 trending themes that our clients will want to focus on as they progress their digital transformation journey. Many of these are not brand new themes, but are continuing themes that have carried over as priorities for 2022.

## They include:



### Cloud Native

**Modernizing architecture and applications that enable a firm to move away from its legacy systems and operate in the cloud.** This enables businesses to purposefully adopt microservices architecture, leverage cloud native services, shift from virtualization to containerization, and introduce serverless computing. This shift heightens the firm's ability to increase the speed and delivery of products and services across the organization. Among the further trends here are a greater focus on pro-actively managing the risks of cloud, and seeing growth in third-party managed services on cloud.



### Accelerated Continuous Delivery

**Automating and accelerating delivery with modern cloud native, continuous delivery software toolchains for processes for infrastructure and applications.** This key trend includes transforming an organization's very mindset. Adopting both a GitOps and DevOps culture and approach adds value. Also key is selecting and integrating API-based platforms/services, as well as Infrastructure as Code with CI/CD for rapid software delivery. Continuous delivery powers innovation and a continuous delivery toolchain integrated with fully automated ITSM processes is absolutely key to success.



### Data Democratization

**Achieving data aggregation across business lines to provide ubiquitous and frictionless access to data from anywhere.** This enables insights across business lines and previously siloed buckets of data, and accelerates both innovation and delivery. It also encompasses the trends toward:

- Extending existing data platforms and data lakes
- Using AI/ML-based analytics
- Replatforming point solutions to enable application migration to cloud
- Wide adoption of similarly democratized cloud-based data warehouses for aggregation/distribution/control
- Implementing data mesh/fabric/virtualization for data aggregation without duplication and governance overheads
- Forging strategic partnerships to deliver cloud-based financial services platforms and services (e.g., CME/Google, Goldman/AWS)



### Frictionless Security

**Implementing security and compliance controls and policies embedded into the cloud ecosystem and delivery pipelines, while not impeding the need for speed and agility, and without data leakage.** This enables cloud adoption for accelerated delivery led by developers, as well as enabling hybrid workforces, while making sure services are safe, secure and compliant. This adds significant improvements to real-time surveillance and threat analytics to support remote/hybrid working, ensuring evergreen IT infrastructure and data platforms that standardize baseline security configurations/tooling and policy. It also includes the current strategy for deploying modern analytics-based IT risk assessments, continuous assurance and regulatory control adherence, as well as facilitating real-time security data aggregation and analytics across on-prem and cloud assets. It additionally can improve supply chain governance and protection against supply chain security risks.



## Observability

**Enabling modern service management, tracing, monitoring, event management and ‘self-healing’ for the growing complexity and speed of changes taking place both for on-prem and cloud operations.** This trend includes the adoption of Service Mesh and other management tools to improve observability and help mitigate issues within complex microservices architecture, and the adoption of distributed tracing systems to help monitor and troubleshoot distributed microservices-based systems. Sophisticated self-healing methods rely on advanced AI tools and predictive analytics to detect anomalies and predict problems using enhanced monitoring systems (DataDog) or cloud provider tools.



## Agile Organization

**Facilitating an operating model and digital workplace technologies that embrace agile project management, a DevOps/GitOps culture and principles, and a hybrid central/remote workplace ecosystem.** This trend includes ways to improve continuous delivery by supporting the transition to a DevOps and GitOps culture and processes. It also facilitates a hybrid operating mode that enables a combination of a central and remote working environment with a digital, flexible employee experience that is contextual and friction free. This allows for enhanced synchronous and asynchronous collaboration methods and better communication.



## AI/ML Process Automation

**Automating business and operational processes to remove delivery bottlenecks and access new Application Programming Interface-connected services through platform integration.** This leverages API-connected systems to create repeatable processes and improve quality, reusability and governance of business processes. AI/ML--led Robotic Process Automation tools are deployed to automate manually-intensive human-led processes -- including ITSM processes that are impediments to automation -- that cannot be easily replaced by API--connected systems (manual document management systems).



## Resilience

**Maintaining resilience of critical application suites, while modernizing the underlying platform and delivery processes.** The overarching goal is to maintain resilience and sustainability of operations even when moving at light speed to cloud operations from on-prem system. The goal is to prevent major outages, and introduce resiliency into the organization, even as infrastructure, applications, processes and more are ever-evolving and changing. There is a growing need for cross-functional, end-to-end platform and application assessments conducted to identify and remediate risks before they impact the stability of the platform or application.

## Measures of Success

As you consider these key 2022 trends that we have identified, keep in mind these important, multi-faceted measures of success as they relate to software delivery: Speed and Stability.



### Speed

- **Deployment Frequency:**  
How frequently a team successfully releases into production, such as daily, weekly, monthly, yearly.
- **Lead Time for Changes:**  
The median amount of time for a commit to be deployed into production.

### Stability

- **Change Fail Rate:**  
The number of failures per the number of deployments.
- **Time to Restore Services:**  
For a failure, the median amount of time between the deployment which caused the failure and restoration.



# Retrospective Review

## 2021 vs. 2022:

### How Far Have We Come?

Many of the trends we identified in 2021 across the financial services industry have continued into 2022 and are maturing and gaining wider acceptance:

- ✓ Operating models have begun shifting from Waterfall to Agile methods
- ✓ Planning, building and operating business silos are moving toward DevOps and the convergence of design, build, test and operate
- ✓ Separate technology silos have morphed into cloud-first/digital platforms
- ✓ Closed/proprietary systems have opened and embraced an API ecosystem
- ✓ Domain-centric data continues to shift to data-centric architecture and the use of AI/ML for advanced data analytics
- ✓ Perimeter control security systems and building to prevent unauthorized access has transformed into being led by policy-based controls that enforce role-based access restrictions, and provide frictionless control embedded in automation pipelines

Want to discuss your specific business needs, or learn how Synechron leverages its **'Application Resilience Assessment' (ARA)** to test and assess the entire end-to-end platform and application architecture of a financial services business for resiliency?

Reach out to us at: [info@synechron.com](mailto:info@synechron.com).

## About the **Author**



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David Sewell is the CTO at Synechron's London, UK Consulting business, having previously joined from Citihub Digital. He is an innovative technologist with more than 25 years' experience creating IT strategies and building solutions across the capital markets industry.

### **Want to learn more?**

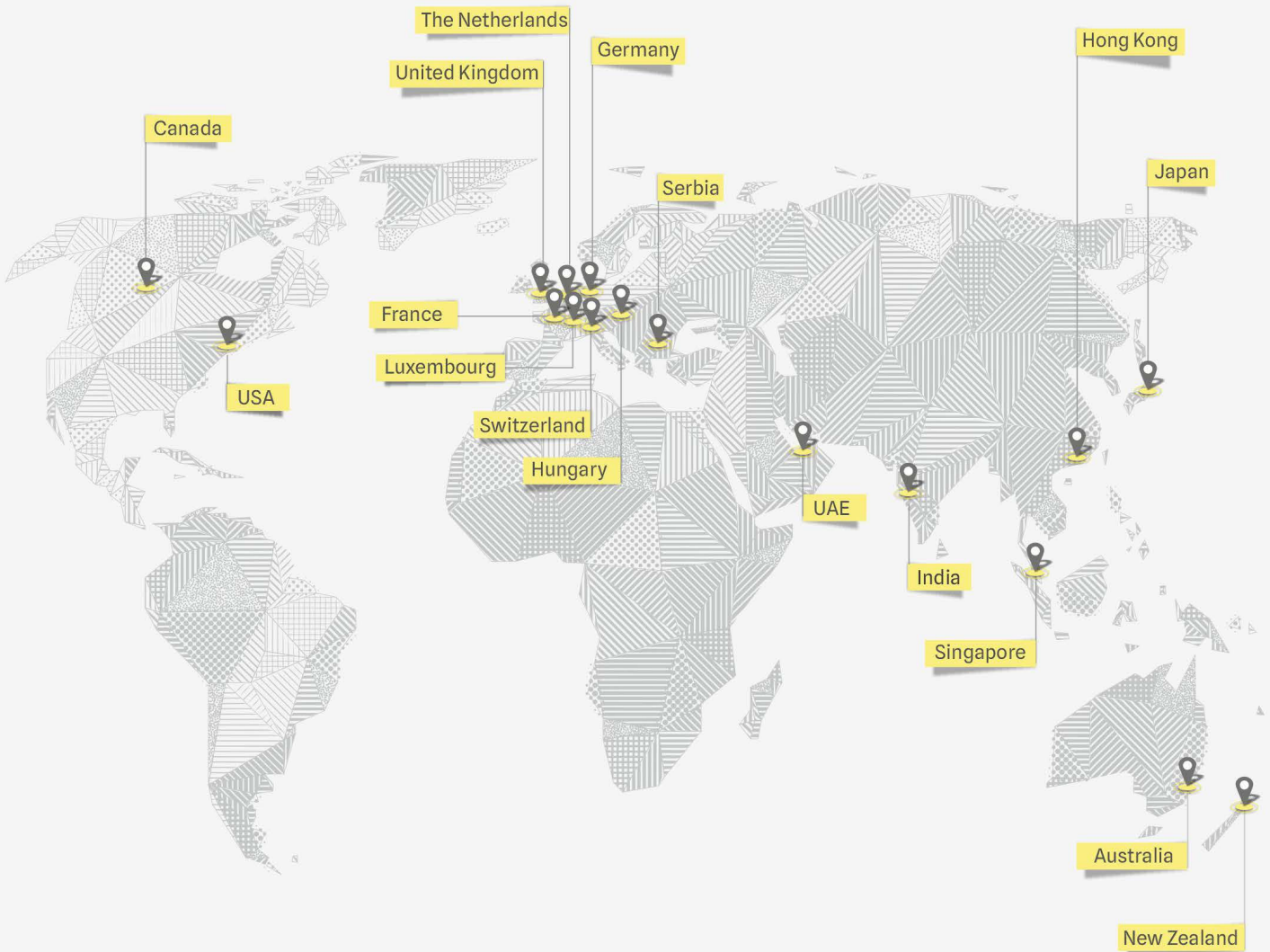
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