



# The truly resilient infrastructure is not afraid to learn from other industries

**The size and influence of the \$5 trillion a day foreign exchange (FX) market makes it a primary source of systemic risk in the international financial system. To mitigate that risk, the infrastructure of the FX market has to operate to the highest standards of operational resilience. To ensure it never allows those standards to slip, CLS is continuously exploring and adapting risk management techniques pioneered by other industries, says John Hagon, head of global operations and relationship management at CLS.**

The currency markets are substantial and highly liquid. An estimated US\$5 trillion changes hands every day, according to the latest triennial survey by the Bank for International Settlements. Other financial markets, ranging from equities to bonds, as well as international corporations with exposure to global currencies, are heavily reliant on the foreign exchange (FX) market to function effectively 24 hours a day.

To maintain trading volume of this size across multiple jurisdictions continuously requires a stable, globally dispersed infrastructure with minimized operational risk. This is, ultimately, managed by technology and people. These two factors combined ensure the infrastructure underpinning financial markets remains operational, cutting-edge and resilient in all market conditions.

CLS is one of those critical market infrastructures. As the operator of a crucial global currency settlement system, CLS is one of a number of systemically important financial market infrastructures considered essential to the functioning of the global financial system. It connects 62 member-banks as direct participants and 17 real-time

gross settlement systems (RTGSs) around the globe in order to facilitate the timely exchange of payments required for settlement each day.

If any component of the CLS ecosystem were to fail or be temporarily disrupted, liquidity and credit problems would spread rapidly through the global financial system. The primary role of CLS is to protect its members and its 18,000 active third parties (indirect participants) from this risk.

## **Tools and techniques can be learned from other mission-critical industries**

As financial markets and technology develops, participants and regulators alike are continuously looking for innovative risk management solutions, and CLS is no exception. Like any forward-thinking financial organization, CLS is casting the net wider towards other mission-critical industries as they look for examples of best practice in operational risk management.

It is now drawing best practice lessons from other sectors. CLS has implemented models built around concepts used by other industries to



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help manage its operations and risk management in a more effective manner.

There are many transferable lessons and skills from other industries that the financial services industry is adopting to stay at the forefront of technological and operational excellence. Many institutions are taking the lead from industries such as aerospace, air traffic control and the military to gain insight into innovative operational and monitoring models that can be applied to build resilience and manage risk.

Those in the aerospace industry, such as jet engine manufacturers, operate a world-class global monitoring service, where data is turned into credible information for engineers and operational risk managers. They achieve this by equipping their engines with hundreds of sensors that provide information, monitored by a service team in real-time. If the data reports any errors or anomalies, the team is able to react swiftly, ensure the correct replacement parts are available and dispatch a specialized engineer to the right place at the right time.



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**- Michael Enright, CLS**

### **CLS is applying lessons from the aerospace and energy industries**

CLS has introduced a similar approach to data management in order to manage resiliency threats rapidly and effectively. It has systems in place to analyze the data it receives and turn it into valuable business information, allowing the team to anticipate, and react more quickly to any potential issues in the FX market before they occur. The team now compares the real-time activity of members with their “normal”

activity and performance, meaning they catch and address issues earlier, resulting in less disruption. The new model enables CLS to solve many problems and mitigate risks before they impact critical business deadlines. In the context of detecting a cyber-threat or attack, monitoring for unusual activity can be very powerful.

Part of this undertaking included the installation of a huge information panel in the office of the global operations team. Inspired in part by the energy industry, where power station teams are able to monitor all activity from



### **Lessons from the military**

It was during my time in the military that I learned the importance of empowering subordinates and team-mates to make decisions and question how we accomplish different tasks. A fresh set of eyes or a different way of thinking can sometimes see weakness in a plan, something that is overlooked, or even a task that can be simplified or streamlined.

The army uses a process known as an After Action Review (AAR) to learn from issues that arise in any situation and mitigate future risks. It also has a solid forum for knowledge-sharing, where people can analyze their experiences and learn the most up-to-date and best practices to mitigate risk.

I draw on my military risk management experience every day as part of my role in the operations function at CLS, where I am part of a team responsible for continuously managing members’ liquidity risk. We constantly monitor payments and set alerts for all members based on their historical pay-in times. This gives us a detailed oversight that enables us to inform members of any potential issue before it occurs, thereby minimizing risk and improving the efficiency of our operations.

*Michael Enright, Associate, Operations at CLS*



## “Implementing innovative operational risk management solutions inspired by other industries is a credit to the changing attitudes of the global FX industry.”

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a single control panel, the “info-wall” ensures operations professionals are able to holistically observe trading, payment and settlement activity in real-time.

CLS has also implemented a continuous assessment and competency evaluation model based on one used by air traffic control services worldwide. In a mission-critical industry, where safety and operational risk management is paramount, it is essential that air traffic controllers are able to prove their ability to meet the highest required

qualifications and standards on a continuous basis.

### **Resilient and reliable infrastructure underpins the FX market**

The competence of the CLS operations team is now continuously assessed using a comprehensive accreditation framework to ensure the best-skilled people are running the service. This, combined with an operational excellence approach to near-miss data analysis and problem

solving workshops, has enabled CLS to continually refine and improve its monitoring skills and processes.

It is no surprise that managing resiliency threats is at the top of the CLS agenda. This is compounded by high-profile examples of technology outages, which have had a severe impact in other markets.

The emphasis now being placed on implementing innovative operational risk management solutions inspired by other industries is a credit to the changing attitudes of the global FX industry. Just like an air traffic controller, or an aviation team responsible for a jet engine in a passenger airliner, the FX industry infrastructure enables the wider market to operate effectively and efficiently. In short, failure is not an option.

[Want to find out more?](#)

### **Resilience: lessons learnt from other industries**

Monday 12 October 2015

**10.15-11.15 a.m.**

**Conference room 1**

**Moderator:**

**Natasha de Terán**

Head of corporate affairs, SWIFT

**Panelists:**

**Phillip Enness**

Global lead, markets infrastructure, banking and financial markets, IBM

**John Hagon**

Head of global operations and relationship management, CLS

**Hannah Nixon**

Managing director (head), UK Payments Systems Regulator (PSR)