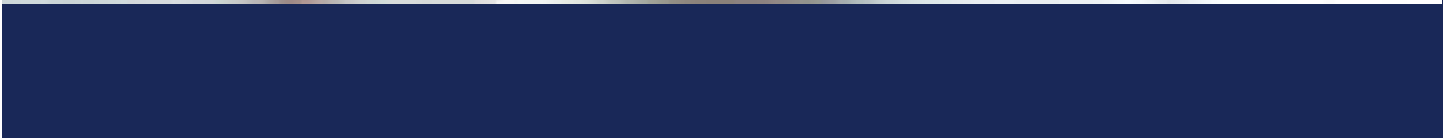
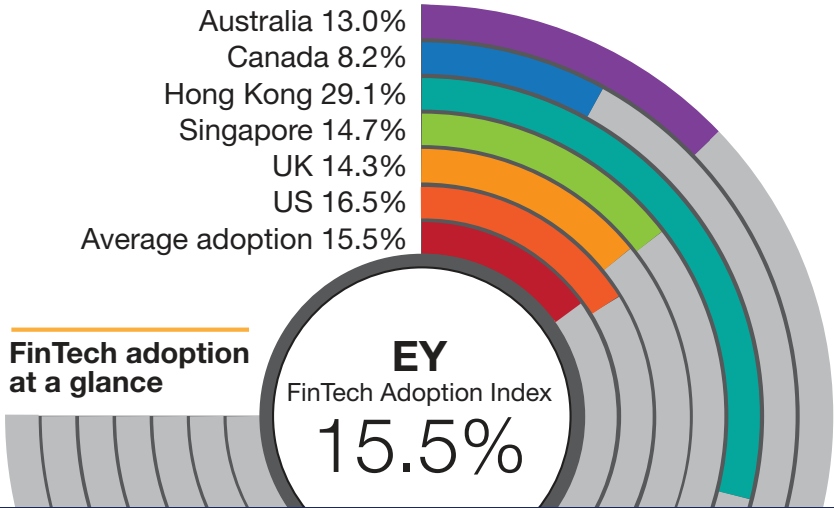


Six Key Considerations for Financial Firms to Meet the Fast Growing Technology Demands of FinTech Services



Financial service companies are learning new ways to meet the challenges caused by consumers' increasing demand for mobile services, security, and customer-focused innovations in order to maintain a competitive edge.

A customer-centric approach to business results in a greater presence in all areas of financial technology (“FinTech”) services ranging from product development consumer demand models to cyber security risk management. With these demand requirements is a commensurate stewardship of technology budgets so they can be directed to service innovations the consumer expects.



Six Trends of FinTech Services

Banking and financial services customers are increasingly demanding access to more services via their mobile devices from balance inquiries to mobile payments and transactions that are more complex. While the U.S. lags behind Hong Kong, it is second according to the FinTech Adoption Index by EY.¹ If banking companies want to stay relevant in the financial services industry, they must also be able to provide services for all forms of mobile and wearable devices.

Financial and IT leaders must take into consideration the following six FinTech trends:

- 1 Increased demand for mobile banking and mobile payments across all consumer devices
- 2 Improved cyber security for mobile applications, mobile banking, and mobile payments
- 3 Increased regulatory compliance
- 4 Expansion of big data and the determination of best practices for its management
- 5 The optimal standardization and deployment of IT resources with budget directed towards service innovations
- 6 Increasing customer satisfaction, which dictates FinTech investments

1 Increasing demand for mobile banking and mobile payments across all consumer devices

The statistics concerning the ubiquity of the smartphone and all other mobile devices reveal nothing but growth: about half of mobile phones in the U.S. are Internet-enabled smartphones. Consumers are using their tablets, smart phones, and now wearable electronics in new ways with growing expectations for connectivity and access. What consumers are doing with their mobile devices is that which financial services firms must understand. Consider:³

- Thirty-nine percent of mobile phone owners with a bank account used mobile banking, up from 33 percent from previous surveys.
- The most common use of mobile banking is to check account balances or recent transactions (94 percent of mobile banking users).
- Among mobile banking users, transferring money between an individual's own accounts, (61 percent) and receiving an alert (e.g., a text message, push notification, or e-mail) from their bank (57 percent) are the second- and third-most common uses of mobile banking.
- In the 2014 survey, the prevalence of mobile banking continued to increase, reaching 39 percent of mobile phone users with bank accounts and 52 percent of smartphone users with bank accounts.

The expectation is for mobile contactless payments to increase dramatically in the next five years. When consumers were asked whether they thought that mobile contactless payments would become a major form of payment in the next five years, more than half of consumers reported that it is "very likely" (17 percent) or "likely" (40 percent).²

The speed of data delivery across mobile devices is crucial as consumer patience for downloading data is minimal. FinTech executives need scalable point-to-point data transport to keep up with demand. Colocation data centers powered by optical platforms with rapidly scalable point-to-point transport up to 2.5 Terabits at GigE, 10 GigE and 100 GigE speeds. These FinTech officers should consider data centers with:

- Dedicated Layer 1 and switch-based Layer 2 services,
- Speed options ranging from FastE to 100 GigE,
- Access to hundreds of networks and carriers.

Six Trends of FinTech Services



2 Improving cyber security for mobile applications, mobile banking, mobile payments

Accommodating mobile banking and mobile payments increases the amount of data that financial companies have to provide and protect. Cyber security now ranks among the largest IT expenses at U.S. banks. In a survey of financial institutions, 79 percent expected cyber security costs to increase in the next three years.²

Most financial services firms are not adequately equipped to provide these new capabilities, yet 27 percent of executive leaders rank cyber risk as their top priority.⁴ Making decisions on how to manage this data risk is being guided by IT leaders as the risks of fraud detection, malware, and data breaches become more and more invasive.⁶

While the focus is often on security breaches by remote access, data centers can be – and sometimes are – attacked physically. Such physical breaches can result in the theft of valuable data as well as actual physical assets, and can lead to costly downtime. FinTech businesses are finding it easier to relegate physical security to data centers as opposed to maintaining their own large IT security departments.

Data center colocation providers can effectively and efficiently provide best-in-class (in some cases, military-grade) data center security, in part because they offer economies of scale (since data centers provide security for a number of colocation customers) and in part because data center management (including security) is their core competency.

When looking for a colocation services provider, FinTech leaders should look for:

- On-site data center security guards – 24/7, year-round,

- Video surveillance and recording of the exterior and interior of each facility,
- Biometric and key-card security for rigid access control,
- Turnstile doors to prevent tailgating,
- Reinforced physical structures including concrete bollards, steel-lined walls, bulletproof glass and barbed-wire fencing, and the flexibility to have custom security features.

Financial services companies colocating at a CyrusOne data center, for example, receive:

- Dedicated data halls for customer access only,
- Floor-to-ceiling cage material for limited visibility and maximum airflow,
- Barriers on ceilings, above server environments, and below the floor for added protection,
- Laser beams within the walls of the data center to detect unauthorized movement,
- Metal conduit for communication paths, and
- Sensitive compartmented information facility (SCIF) features.

3 Increasing pressures of regulatory compliance to control cyber threats

The past few years have seen a greater increase in state and federal guidelines and regulations developed in an attempt to curb cyber attacks. These include FFIEC examination manuals and guidance, FDIC, Federal Reserve, OCC, SEC and FINRA guidance, as well as state regulatory guidelines from the CSBS. These new regulatory compliance initiatives are negatively affecting profitability according to 79 percent of executives in the banking industry.⁵ Costs associated with cyber security threats such as the retention of external consultants and vendors and the hiring and training of experienced staff to develop and maintain the best possible defense against cyber threats impact profitability.

While many information security regulations apply at the application level (which a colocation services provider does not access), infrastructure provisions applicable to financial services regulation do exist. If a financial services company decides to host data offsite, they should look for a data center services provider that is fully certified with SSAE18, TIA 942 Top Tier, and PCI-DSS.

Six Trends of FinTech Services

4 Expecting big data to determine best practices and future innovations in the financial industry

Big data has become a fact of life for financial companies in an era when demand from mobile services exponentially increases the amount of data that needs to be processed at any given time. Given that banks manage somewhere around 1.9 petabytes (1.9 million gigabytes) of data, the ability to manage that data efficiently and cost-effectively is critical. One of the ways data center colocation enables the management of big data is by enabling FinTech companies to turn capital expenditures sunk cost data center and associated infrastructure) into variable operational expenditures. A flexible colocation agreement that allows the financial firm to scale up or down as needed.

Given that financial services companies are managing large volumes of customer and transactional data so their customers can access their information where, when, and how they want, these companies can't afford for their systems to go down. For most financial services firms, 100 percent uptime is easier and more cost-effective to achieve in a colocation environment, where they can get a high-density/high availability, future-proofed data center environment. When evaluating data center colocation provider, look for:

- Power and cooling architectures that utilizes advanced components and are designed with N+1 and 2N parallel redundancies
- Meshed design that provides a higher degree of resiliency versus other solutions on the market with no single point of failure
- Cooling or electrical systems that can withstand a loss of two legs, yet the systems are still 100% operational
- Distributed redundant electrical design, which allows for multiple levels of redundancy within the same data hall

5 Standardizing and deploying IT resources optimally so budgets can be directed toward FinTech service innovations

In order to manage increasing amounts of data and provide best-in-class security, financial companies' IT capabilities need to evolve. Some FinTech companies can fulfill those evolving capabilities in-house, but in many cases a data center colocation solution may be more effective and efficient.

Colocation enables financial companies to scale infrastructure capacity quickly and efficiently to manage large volumes of customer and transaction data bring mobile applications and services to market faster. Scalability is also a critical driver of the cost savings associated with data center colocation.

With some exceptions, data can typically live quite well in centralized locations. One of the benefits of consolidation with a colocation services provider include economies of scale. Since an enterprise – because an enterprise colocation data center builds and operates data centers at a much larger scale than most financial services firms would in-house, it allows those data center operators to optimize costs both in construction and in purchase of power (one of the most expensive data center requirements).

When companies choose to consolidate their data center operations by col locating at a smaller number of data centers, they reap the benefits of the data center operator's standardized, repeatable deployment model, which reduces the cost of and increases the speed at which new data center space can be deployed.



Six Trends of FinTech Services

6 Increasing customer satisfaction, which dictates FinTech investments

The speed at which business changes is faster than ever and continues to increase. As mobile services continue to expand in the kinds of features available through mobile applications as well as the reach of mobile devices, financial companies will have to run to keep pace with consumer demands. Consumers are no longer maintaining life-long loyalty to one bank and will switch to another financial services business if FinTech services are better. However, those that use mobile regularly, 46 percent say they “definitely will not” switch banks, compared with the 34 percent of customers who partially understand mobile who say the same.⁷

According to a 2015 survey of 3,074 banking customers by Credo.com people willing to share position reviews (promoters) are much bigger users of a bank’s online and mobile tools than detractors. Over 31 percent of promoters use a bank’s website daily, compared to only 21 percent of detractors. Over 13 percent of promoters use a bank’s mobile app daily, compared to only 8 percent of detractors.⁸

Improving FinTech services such as mobile and online banking is much easier to do when a company can scale quickly and efficiently with a colocation services provider than when that investment is otherwise engaged with scaling infrastructure in-house.

Ideally, financial companies should have data centers that are a best-fit solution, meaning they grow and adapt as the firm’s needs evolve. That is typically much easier (and less expensive) to do in a colocation environment versus in-house.

When considering a data center for colocation, financial companies should look for:

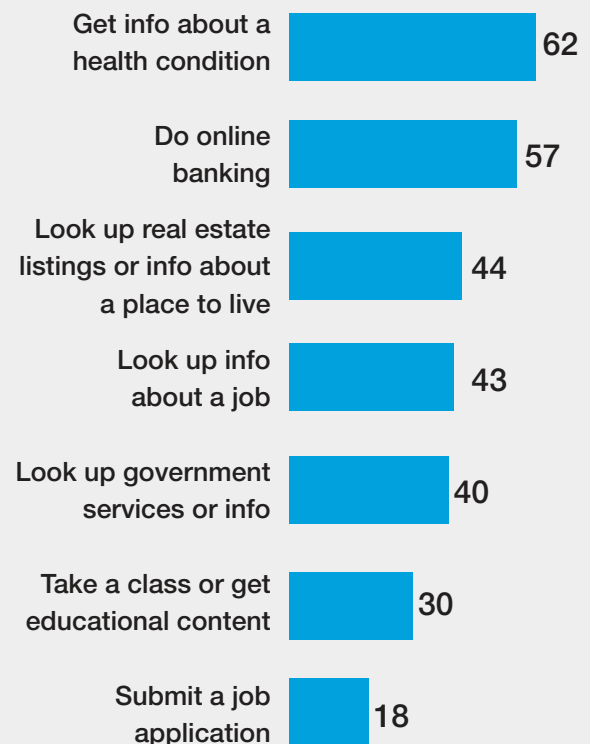
- Secure, shared infrastructure that can deliver lower costs and faster responsiveness when a financial company needs to change power or size requirements,
- Low to very high-density solutions that are tailored to the rack level,
- Power redundancy tailored to the rack level, and
- A flexible contract so financial companies can grow into purchased power and space over a given time period.

Online Banking

In today’s connected environment, consumers increasingly expect to do just about anything from their mobile devices – especially accessing online banking from their smart phones. The Pew Research Centers’ U.S. Smartphone Use survey in 2015 discovered 57 percent of users accessed online banking, second only to researching a health condition.⁹ FinTech services firms must stay ahead when accommodating consumer demands, yet most financial services firms don’t have the scalable data storage capacity or best-in-class cyber security they need in-house to do so.

More than Half of Smartphone Owners Have Used Their Phone to get Health Information, do Online Banking

% of smartphone owners who have used their phone to do the following in the last year



Pew Research Center American Trends panel survey, October 3-27 2014

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While U.S. banks are significantly increasing their FinTech products, consumers are steadily moving away from traditional banking resources at a dramatic pace. According to a Gallup Poll almost one in four banking customers are using online channels more frequently (23%), while 13% report they have started using mobile banking since 2011. In contrast, 50% of customers are visiting a branch less often, while 46% are using call centers less often.¹⁰

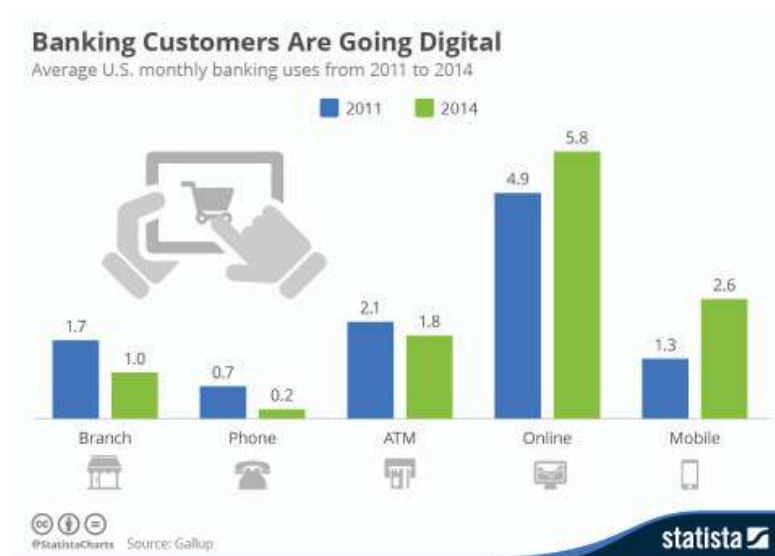
In conclusion, colocation providers like CyrusOne help financial services firms achieve scalable storage and best-in-class cyber security, so FinTech firms can meet consumers' demand for mobile banking.

To learn how **CyrusOne** can help you, visit www.CyrusOne.com.

About CyrusOne

CyrusOne specializes in providing highly reliable, flexible and scalable enterprise data center colocation that meets the specific needs of customers across its broad portfolio of carrier-neutral data center facilities in the United States, Europe, Asia and Latin America. CyrusOne employs its Massively Modular® engineering and design approach to optimize design and construction materials sourcing and enable just-in-time data hall inventory to meet customer demand. The company engineers its facilities with redundant power technology, including an available 2N architecture.

CyrusOne customers can mix and match data centers to create their own production and/or disaster recovery platforms by combining facilities via the low-cost, robust interconnectivity provided by the CyrusOne National Internet Exchange (IX).



¹ EY.com: FinTech Adoption Index, Sept. 2015 – Oct. 2015

² Board of Governors of the Federal Reserve, “[Consumers and Mobile Financial Services March 2015](#).”

³ New York State Department of Financial Services: Report on Cyber Security in the Banking Sector, May 2014

⁴ BankDirector.com: Bank Director Growth Strategy Survey, August 2014

⁵ New York State Department of Financial Services: Report on Cyber Security in the Banking Sector, May 2014

⁶ BankDirector.com: Bank Director Growth Strategy Survey, August 2014

⁷ J.D. Power, McGraw Hill Financial: 2015 US Retail Bank Satisfaction Study, April 2015

⁸ Credio.com: 2015 U.S. Banking Satisfaction Report, June 2015

⁹ Pew Research Center: U.S. Smartphone Use 2015, April 2015

¹⁰ [Gallup Panel Web study](#): Risks to Banks from Rise of Digital Banking: June 11 – June 25, 2014