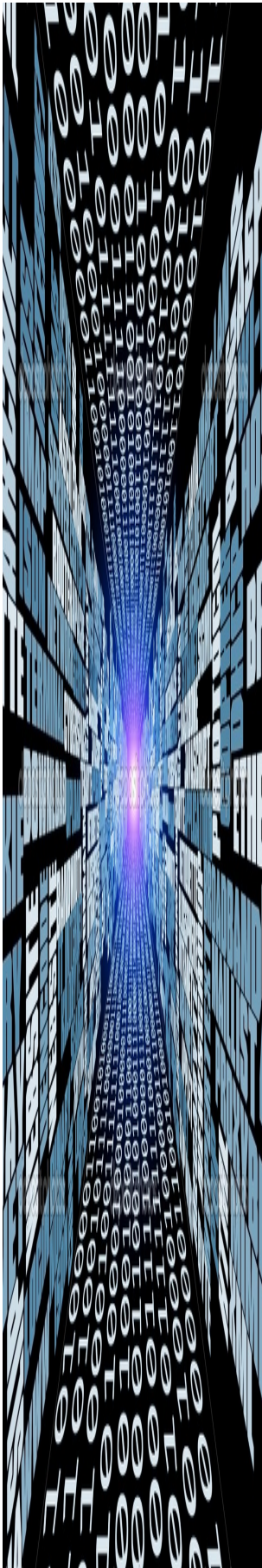


Digital Technologies for Niche Smart Banks

Actionable Science



Introduction

Digital has been the buzz-word for quite a while now. Many companies are gaining momentum with their Digital Initiatives. CEOs do directly get involved in these initiatives as they affect the Go-To-Market channels and Demand chains directly. As per the McKinsey Global Survey² Digital tipping point reached somewhere in 2014W and has been a primary agent for companies to engage and grow.

It is evident that Digital has become one of the key strategies for companies and is a critical asset for companies' quest for growth. Digital strategies are pursued for key competitive advantages² for tapping new markets or for launching new related products and services.

The business use cases of Digital are many and that is a Strategy White Paper topic to discuss.

What enabled this tipping point?

- a, Explosion of smart always-on mobile devices.
- b, App ecosystem² that allows easy and standard mobile usage experience. Remember² when Windows 8.1 was launched it changed the way PC was to be used.
- c, Big Data ecosystem^H Emergence of BigTable² Hadoop the first generation big data ecosystems to the next generation technologies like Spark² GraphDB² Streaming that allow handling of huge data as and when it gets generated.
- d, Cloud^H Cloud infrastructure allows to build applications that help collect data² stream data² process data and analyze it smartly to allow for meaningful context aware actions to be taken.
- e, Social Media^H Almost the entire world population is out there in this virtual social media world and they are tweeting² liking² posting² sharing and opining multiple times a day ' week. That's a lot of data out there. And some of this data would be very relevant to the business of the company. Integrating and tapping into such data can help companies strategically to plan² launch² prevent and correct their products and services.

Data Integration Journey

Mixing of Core Operation Systems data with data generated and made available from Social media helps Companies in many ways. It could provide context aware suggestions that could be acted upon. E.g. When someone changes a job, a bank could use that information to provide a new product or service. Or when asset prices increase in a particular region, bank can integrate that data real-time to explore and provide new options for existing customers or prospects.

Data Integration Overview



Or, the company can understand where it stands with respect to customer satisfaction and brand of its newly launched Product and see if it is creating a positive sentiment or negative. Based on the analysis the company can take corrective action.

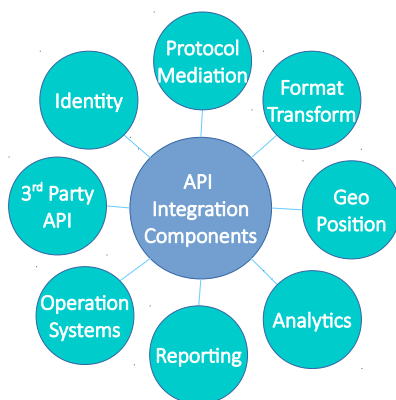
Integration of such data is made possible by new 3rd party companies and social media which expose APIs for a small fee. LinkedIn, Axiom etc are some examples.

API integration with current core operating systems without disturbing the operations is a key success factor. With Cloud options these could be done in Amazon/Heroku/Azure or such platforms with ease and with pay by use model.



Api integration involves taking care of security, data encryption, fair data usage policies, compliance to regulatory standards etc. Identity, Metrics, Reporting, Protocol, Transformations are some of the key integration aspects that should be taken care of at application and platform layer. And if the platform is multi-tenant the security requirements seep into the application layer even more.

API Integration Services



Exposing Your APIs

Enabling your organization to expose APIS could be of immense benefit to your demand and supply chain partners. Esp. when you dont have exclusive partners dealing only for your organization this initiative would be even more valuable.

On the one hand your partners can use your apis in a seamless service level integration and on the other hand it would also enable to enable your partners to provide in context sale or supply based on what the end customer wants. Imagine a new vehicle dealer provides that your institution provides the best insurance quote for a given customer profile and want to do business with you, without you doing a multi month integration project for tying up the IT systems to talk to each other.

If your organization has exculsive partners there one could muscle through and force the partners to directly use the Organization's applications and systems for capturing orders and supplies. Even there it would be easier to just expose the API and ask your partners to figure out the best user interface for themselves, giving them choice and making them deal with their own costs and evolution.



Exposing APIs could not only create new channels for demand and supply but also expand existing channels markets, outreach through new partners and geographies added using these APIs.

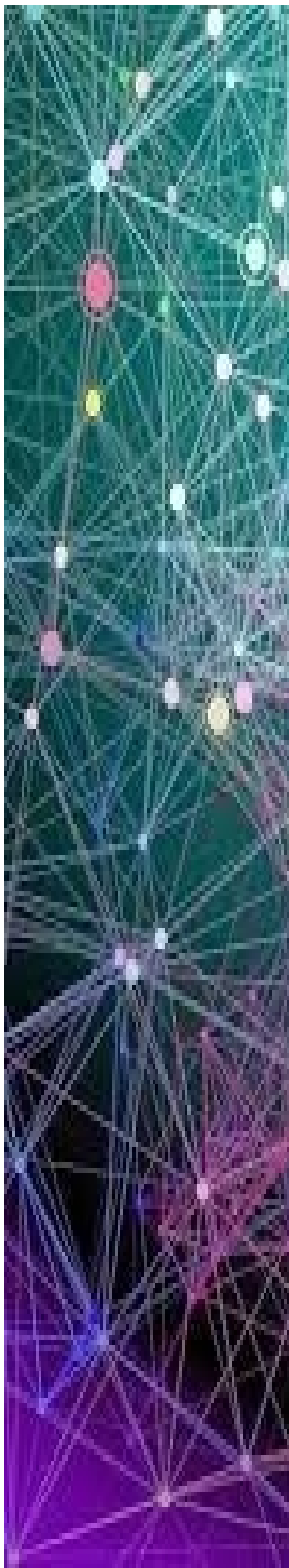
Stripe payment api is the main differentiator and reason why it grew so big so fast.

To enable APIs for your systems the same API components described above should be implemented within your operational and planning systems. Added complexities would include Versioning, Continuous Release management & pipelines, Billing & Service management and a mature DevOps cycle enabling these.

Some of the technologies for components mentioned above:

Protocols:	REST, Webservices, JMS
Identity :	Integrated LDAP, ADS, Platform Defined
Payload:	XML, JSON, Other Formats
Integration Frameworks:	Spring Integration, WSO2, Apigee, Camel, Mule
DevOps:	Jenkins, Git, Chef, Docker etc





Data Explosion and Making use of It, Really

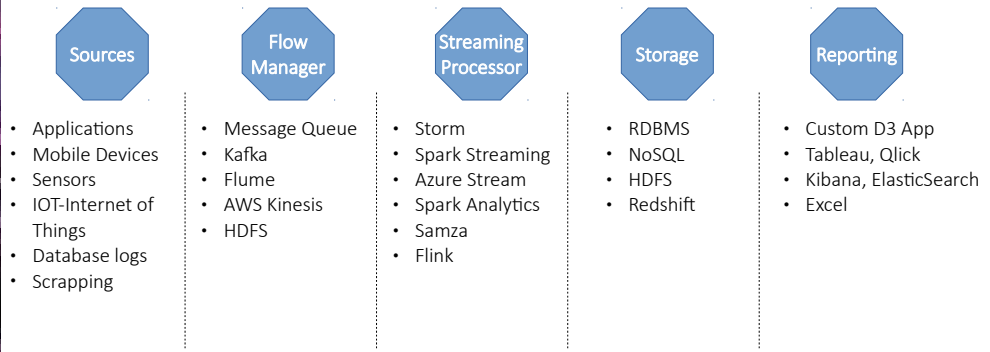
It is one thing to want to make use of new Mobile based applications and new social data events that happen daily and another thing to actually commercially exploit these for better decisions and actions.

You would want to be alerted soon enough about a service quality issue/outage before your customer calls the call center. Or, if a customer just moved into a new locality your sales agent alerted for related Products and Services to be proposed.

Such possibilities exist with the advent of big data capturing and processing technologies in the recent years.

Hadoop, HDFS helped in initial processing of collating, storing and processing big data. Spark Streaming, Kinesis, Lambda, Hive/Pig, Redshift, S3, Kafka, Flume, Spark Analytics, Spark Graph DB made tremendous advances in taking these capabilities to the next level where developing an application does not appear as complex as it was with initial map reduce programming. Integration of other opensource and commercial software to these technologies also are taking place fast as otherwise the traditional DW-BI projects would be termed Legacy and outdated. ElasticSearch, Kibana dashboards, Qlick, Tableau provide good easy way of spotting and delivering actionable items to the desk of your sales agent, service agent etc

Data Pipeline



Advanced and Predictive Analytics could be used to predict likelihood, event that could be acted upon.

Many of the Organizations have embarked on this Journey in last couple of years. This decade would turn out to be digital decade where more such Business Process innovations and technologies innovations would be the order of the day. And such initiatives are driven and monitored directly by CEOs and CXO offices given the strategic nature of the outcome. The survey results only confirm such trends getting stronger.

Organizations have to be prepared for a world where customers dont interact explicitly with them to do business. They may engage through mobile or through one of your partners' applications. The current progress in technologies help easy adoption of this journey without upfront capital investments or embarking on a multi year projects with traditional SDLC lifecycles.