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LOCATION INTELLIGENCE TO IMPROVE CUSTOMER EXPERIENCE: ADVICE FOR FIS

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MINI-ROUNDTABLE

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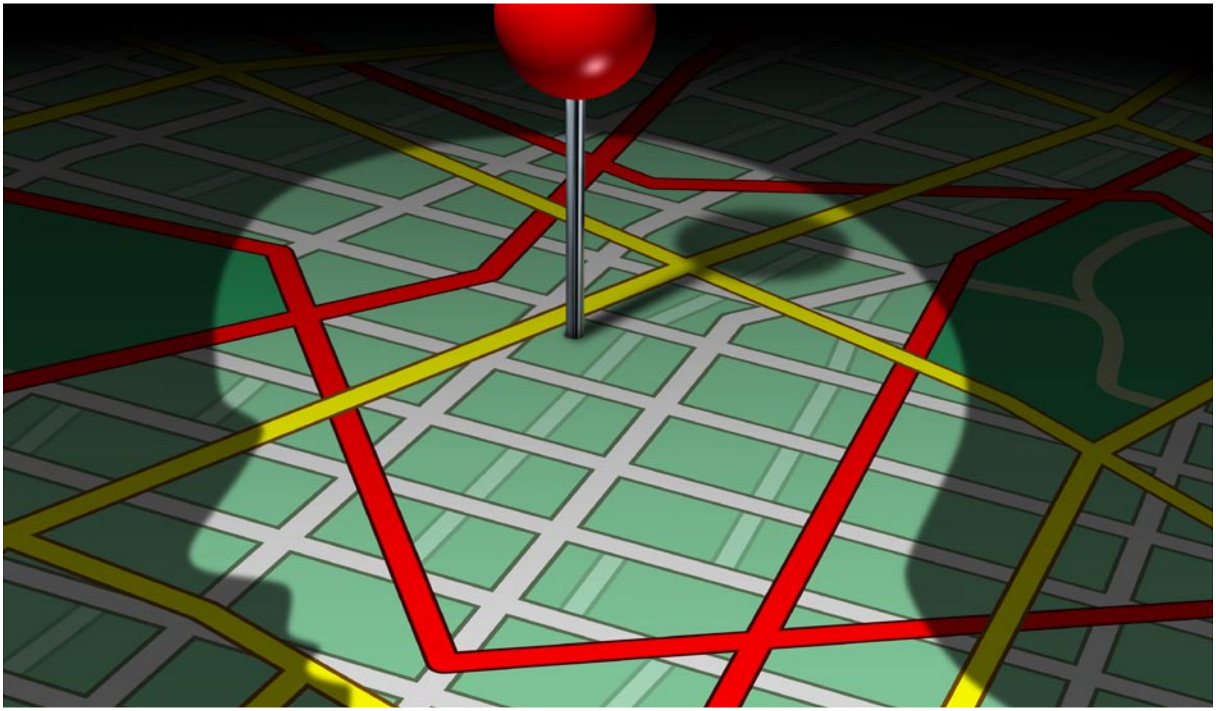

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Greg Van den Heuvel is the chief operating officer of Pitney Bowes Software and Data. In this role, he is accountable for the continued global financial growth of the business, including strategy, product and solutions development and management, strategic acquisitions, enablement, technical support and business development. Mr Van den Heuvel also works closely with the sales, engineering and marketing organisations to ensure that all go-to-market planning, product development prioritisation, and growth initiatives are in line with Software and Data's key verticals and markets strategy.

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Jim Burnick is the managing director of Financial Services for Pitney Bowes Software and Data. In this role, he is responsible for the overall development and industry success of Pitney Bowes Digital Commerce Software Solutions within the financial services industry. These solutions help clients drive critical growth, productivity and regulatory imperatives utilising world class capabilities in areas of customer information management, location intelligence and customer engagement solutions.

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Joe Francica is the managing director of Geospatial Industry Solutions for Pitney Bowes Software and Data. He is recognised as one most influential people in geospatial technology and the leading proponent of location intelligence (LI) solutions for over 30 years, having founded the Location Intelligence Conference in 2004. Mr Francica has published and broadcast over 500 articles and podcasts on LI and has contributed to three books: P*rofiting from a GIS*, *Geographic Information Systems in Business* and the *Encyclopedia of GIS*.

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Mike Fischer is a managing client partner and Financial Services Practice lead with RCG Global Services. He is responsible for business development and strategic delivery within the Northeast region and has 25 years of consulting industry experience. Mr Fischer is a trusted adviser to clients across the retail, commercial and investment banking, asset management, FinTech, capital markets and brokerage and trade domains. He focuses on business impact and value through digital transformation, advanced analytics, strategic data and information management, business applications and technology enablement, and sustainment initiatives.

R&C: How would you describe current demand among financial institutions (FIs) for location-based technology?

Van den Heuvel: Demand for location-based technology is incredibly strong. FIs are trying to engage customers in a highly-personalised and interactive way, and they are doing so with the help of location intelligence (LI) applications. LI applications begin to describe *where* a customer might be, in turn influencing *how* an FI can serve them better. While customer engagement is really driving the use of LI technology for FIs, it is important to also note that FIs are using LI technology to also better position their assets, like stores and ATMs, in better locations. From these locations, the LI technology can also then help FIs understand the demographics associated with those locations, and the placement of those assets can extend the reach on how they can serve their clients in those areas.

Fischer: FIs are undergoing a rapid change in terms of how they engage and interact with their customers and what their customers' wants, needs and likes are, so they can custom tailor products and services. By leveraging modern data and analytics technologies, and enriching their customer profiles with LI, FIs can identify their target customers and enrich their profiles to understand more about them – such as lifestyle, spending, demographic and so on – which then allows them to offer custom-tailored services and products through mobile, online or social distribution channels. With mobile banking, location-based knowledge of a customer, and customer behaviour combined with points of interest (POIs) in that location will be in greater demand.

Francica: The current demand reflects a more sophisticated understanding of the use of LI, given the need for better entity resolution to expose fraud and to understand the disruption taking place in retail – branch banking, specifically.

R&C: What factors are causing FIs to consider location intelligence (LI) applications? In what ways can this technology help them to make better decisions?

Van den Heuvel: Customer experience (CX) applications are critical in how they influence marketing activity and help FIs understand the location of an individual so that they can serve them better. For example, CX applications that incorporate an LI component can help an FI profile mortgaged homes and extend added protection for that home if it is within a known-risk boundary. Insurance providers use these same applications to assess risk exposure to clients, ultimately offering more accurate and personalised experiences. FIs can offer this same level of service using the same type of technologies.

Fischer: Today's consumers want to do business with companies they know and trust. Part of building that trust is knowing where customers are and their interests. LI allows an FI to be more personable and helpful during a time of need. It can involve serving up targeted offers at sporting or social events, providing the closest ATM location to a banking customer in need of cash or preventing fraud from bogus merchant transactions. FIs are constantly trying to increase revenue or save costs by looking at several factors, including how to service their customers with targeted offers and recommendations, how to acquire new customers based on the demographics knowledge of a region or a location, how to intelligently model customer behaviour and apply it across different markets, how to optimally route sales teams to a location for new customers, and how to optimise ATM/POS device failures and predictive maintenance with location knowledge.

Francica: Mobile banking, activity-based marketing and the concept of Know Your Customer (KYC) are major factors. Self-service banking has changed the way customers utilise financial services today. In addition, enriching existing customer information provides a better foundation for business insights. New data, such as location, demographics, POIs and local economic data provides a holistic view of the customers within the catchment area of branches.

"LI can reduce operational risk in payments and credit card fraud through client points of sale authentication and validation using the mobility device."

Jim Burnick,
Pitney Bowes

Burnick: The factors causing FIs to consider LI applications are primarily the 'mobile' channel and the new generation of banking customers – millennials – who utilise social networking to a much larger degree than prior generation customer segments. This segment expects a seamless CX in their ability to transact over their mobile devices. LI can improve their CX with onboarding as authentication and reduce the risk of synthetic ID fraud by validating a customer's physical address vs. virtual addresses. From an ongoing transactional standpoint, LI can reduce operational risk in payments and credit card fraud through client points of sale authentication and validation using the mobility device. LI can also help compliance teams and investigators to visualise high-risk crime and fraud areas, as well as improve resolution for KYC and customer due diligence activities. Finally, utilising LI to understand market area for branch location, strategy and performance, and integrating household, census and geodemographic, provides FIs a mechanism to accurately set omni-channel strategy and staffing strategies based on attributes of the market.

R&C: How can spatially-aware applications assist in improving customer experience (CX)?

Van den Heuvel: LI provides an exact point on a map in real-time, which can offer useful information to an individual with regard to the closest areas or types of services that they may be seeking at any given moment in time. For example, if an FI has profiled me as a new homeowner in the process of moving, that FI's local branch has an opportunity to offer me relevant services specific to the closet branch to my new residence. Or, if I recently visited a local car dealership, my FI would be alerted so that they can offer me a home equity loan. In both examples, location is being used to influence the experience I have with a brand – an experience that is timely and highly relevant to my own personal experiences at that time.

Fischer: Many customers and consumers are currently underserved. LI and advanced analytics allow for the creation of targeted marketing campaigns aimed to service underserved customers and consumers. For example, Google adverts, Facebook adverts, optimised branch locations, and customised products and services all lead to increased return on investment on marketing spend.

Francica: If a customer visits an ATM, for example, are there other mobile services that can be offered, such as bill-paying? Knowing how a customer conducts transactions with their FI provides a better understanding of what the next best action should be with that customer, and sometimes the answer depends on location-based data. As another example, if a branch closes, the FI should be prepared for how its trade area will be impacted.

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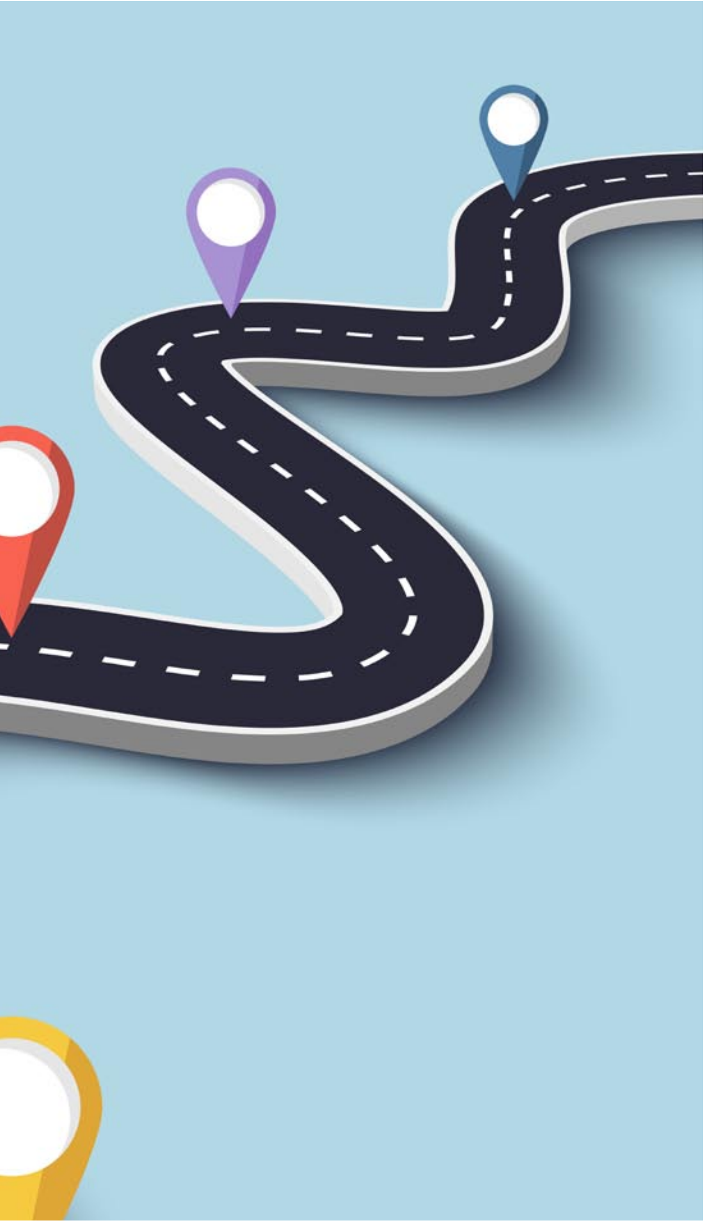
Greg Van den Heuvel, Pitney Bowes

It will need to know how many clients will be left underserved, the travel time to other branches, and whether it will lose accounts.

Burnick: LI, enhanced with spatial context, will allow an FI to improve CX in areas such as a mortgage process. By moving the appraisal and property assessment activity forward in the mortgage process using LI and spatial applications, attributes of the property location relative to risk – such as flood zones, earthquake zones, distance to the nearest fire plug, and so on – can be priced into an overall mortgage contract from the outset. This will result in an improved CX with a more cost effective and efficient mortgage process for the FI. GeoFencing capabilities in spatial applications also allow for an improved CX through more accurate targeting of credit card offers, to customer propensity to purchase products and services, thereby limiting the 'offer noise' pushed to the mobility device.

R&C: What customer demographics are typically interested in having their location used as a means of enhancing the financial services they receive?

Fischer: Typically, we see this most prevalent among millennials. Millennials prefer to engage with providers in non-traditional ways and demand custom-tailored services.



Francica: There is a heightened awareness of privacy concerns when location is considered. There needs to be considerable benefit to the customer for the bank to request their location data. If a customer is applying for a mortgage, will providing location-based data facilitate the ability to reduce the time for loan approval and likewise predict loan performance or default?

Burnick: It is important for FIs to understand the 'trust factor' that is so vitally important to the millennials segment. Therefore, understanding transparency and privacy constraints is critical. The other side of the coin is understanding the demographic that is not interested in this capability and providing a consistent CX no matter what the channel of choice is for the client. For complex transactions, the 'banking centre' continues to be the preferred channel, while simple transactions can be handled with a more flexible approach.

R&C: While location often influences demographics, how have demographics influenced location?

Van den Heuvel: Demographics are a key component to identifying the best location for a store placement, but on the flip side, demographics also influence the types of offerings, products and services made from each retail site location. Location is important, but it is not everything. We may use location to select the site location, but we can also assess that location based on the demographic within that area. So, for example, you might offer a store location and ATM in a heavily-populated area to appeal to the masses. Or you may offer low interest rates for first-time homeowners in areas with a large number of new neighbourhoods under construction.

Burnick: Demographics have played an important role in identifying and prioritising the critical requirements for location services and overall channel strategy for the FI. Privacy and 'opt in' preferences are important offerings any location provider must provide with the service. Social networks such as Facebook, Twitter and Snapchat, and their respective location services, have also provided FIs the groundwork for testing and acceptance of location technologies.

R&C: What challenges might FIs face when implementing LI technology? What steps can they take to overcome potential hurdles?

Van den Heuvel: There are three key things FIs need to consider before implementing LI technology. First, accurate and precise geocoding is critical. There are a lot of LI offerings in the market today, but accurately locating a person, place or thing is absolutely vital to providing optimal services. The rule of thumb is to choose a point-level tool and not a generic one. Second, understand the types of location applications you want to deploy. What are you trying to accomplish and what kinds of internal data do you have that can be enriched with the point-level geocoder? Define the application, identify the data. Third, beyond your own data, identify what other data you might you need to enhance your understanding of an individual or of the application altogether. There could be third-party data that not only works with your data, but also within the point-level geocoding engine you have selected.

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RCG Global Services

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Sorting through all of the noise is a challenge. Focusing on impactful business outcomes is key to success.

Burnick: The accuracy and coverage levels for LI are important considerations FIs must consider. Hundreds, if not thousands, of data sets can be geocoded with LI, some with rooftop-level accuracy. This can become expensive for the FI. The challenge is determining the requirements and scaling accordingly. Besides that, there are the compliance regulations, such as GDPR, and privacy requirements that need to be considered.

Francica: When implementing LI technology, talent acquisition is important. The technological hurdles are minimal compared to finding the right people who understand the extent to which LI can benefit the many areas of finance. FIs will need to find data scientists who can mine location data beyond putting dots on a map. Location analytics looks at spatial regression patterns that yield some very interesting insights about the best performing branches, the best customers and predicting sales.

R&C: To what extent can location-based data feed into FIs' ongoing customer service improvement programmes?

Van den Heuvel: Boundary data when someone breaks a geofence – for example, when they enter a retail bank office – could allow a notification to pull up a history account record on them, which may enhance CX in a unique way when they come into that office. In the future, LI-based geofences linked to a customer's background could provide bank employees with past transactions, potential new services to offer, and an intuitive, personalised experience.

Fischer: At the heart of customer improvement is truly knowing your customer. Location-based intelligence offers the ability to enrich an existing customer's profile and understand what is happening in their lives, who they associate with, places they go, where they consume other products and services,

> **"The technological hurdles are minimal compared to finding the right people who understand the extent to which LI can benefit the many areas of finance."**
>
> *Joe Francica, Pitney Bowes*

and so on. This data is critical for any company looking to improve how they interact with, service, attract and retain customers.

Burnick: The convenience and ease of doing business with an FI continue to be important drivers of customer services and customer loyalty. Improvement programmes are often geared toward making transactions as seamless and consistent across channels as possible. Location-based data is critical to these initiatives.

Francica: Regulatory compliance, strategic planning, network optimisation, M&A activity, data monetisation and fraud detection will all require location-based data and hence make each activity more effective because of access to and analysis of accurate and authoritative location-based data.

R&C: What essential advice would you offer to FIs on implementing an LI application that provides trustworthy data to optimise CX, strengthen relationships with customers and build brand reputation?

Van den Heuvel: When sourcing data, make sure you are dealing with a reputable data provider who specialises not only in the type of data important for your business, but also data integration in management systems and location analytics applications. Only work with companies that are industry leaders in data, data cleansing, data federation and LI.

Fischer: There is a fine line between knowing your customer intimately and being 'creepy'. FIs need to carefully balance how they collect, manage and utilise information that many consider private and confidential. When a customer needs information, advice or a product or service, they will enthusiastically embrace an FI that knows all of the pertinent details. When they feel like they are being harassed or over-marketed to, or they feel like the FI is sharing details or information that they should not necessarily have, that can cause negative repercussions. On the other side of the coin, if customer preferences and buying habits can provide better choices for the customer, without forcing them to complete a plethora of forms, it would be great for customer stickiness and loyalty.

Francica: FIs must recognise the amount of location-based data they are collecting and then determine how they should use this data. Every transaction is tagged with a location, whether it occurs at an individual branch, and particularly if it is mobile. Do FIs want to monetise this data – for example if the data is anonymised? Should they augment the transaction data with demographic and lifestyle data and, if so, what insights will that yield about an individual's banking behaviour that may make them a target for additional financial instruments, such as long-term health insurance or annuities?

R&C: Do you expect to see rising interest in location-based data for FIs in the years ahead? What innovations in geospatial technology are likely to emerge?

Fischer: We see location-based data and associated LI as an as-yet untapped source of potential. The industry by and large is in the infancy of leveraging LI and geospatial applications, analytics and capabilities for strategic advantage. One of the biggest emerging innovations will be 'modelling' customer behaviour based on enriched geolocation data, and predicting behaviour for a new set of customers based on a set of location attributes. With the processing and storage capabilities of Big Data platforms, we expect location-based machine learning and predictive modelling to significantly impact business outcomes. This, in turn, will significantly impact cross-selling and up-selling of products and services, rolling out new products, as well as customer acquisition and retention.

Francica: We see a growing trend by FIs to monetise the data they are collecting and use computer-intensive environments to mine location-intelligent information. Some FIs are using Hadoop clusters to perform data cleansing, address validation, entity resolution, geocoding and location analytics on large volumes of transaction data. These processes are helping in tasks related to detecting suspicious activity for reporting on identity theft or financial crimes and compliance, for example. The geospatial technology industry is beginning to look at how distributed ledgers and blockchain will be used in real estate transactions, so this is an area to watch.

Burnick: Data analytics and artificial intelligence will utilise LI and geospatial technology in the future to create a more individualised and refined CX. Innovation in areas of compliance, including business continuity, using location will be able to anticipate business interruptions, such as major storms and power outages, and respond proactively. R&C