

The Power of Proximity



*Smart Proximity Awareness Technology Makes
Mobility an Enterprise Asset*



“Delivering the right information at the right time to both people and things (via IoT) can boost productivity, enhance customer experiences, improve security, save lives – and much more.” — Phil Ressler, CEO at Sixgill

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PART I

Smart Proximity Awareness is the Next Phase of Enterprise Mobility and IoT

Today's explosion of mobility and distribution of people and things has overwhelmed many enterprises and other organizations. Now there's a way to turn the chaos into an enterprise asset that improves productivity, enhances customer experiences, and keeps people and assets more safe and secure. The solution is Smart Proximity Awareness Technology.

Organizations use this new technology to track the people, places, and things that matter to them; determine proximity and intent; and take actions that achieve specific business goals. Putting proximity awareness to work helps tap new opportunities that result from mushrooming mobility.

One of the biggest opportunities is improved productivity. For decades, new technologies—especially the Internet—have fed continuous productivity improvement. But the latest U.S.

government reports show that productivity growth today is flatlining.

One reason is that individuals are already wildly productive with the technology infrastructure at their disposal. It's groups that are lagging in output improvements.

A New 4th Dimension of Enterprise Information

For the past 50 years, the enterprise has applied progressively more powerful computing to construct three dimensions of information and develop a good understanding of each.

1. Businesses know their "Whos." Who their employees, customers, suppliers and partners are. And they have detailed records of "who" their machine, media and digital assets are.
2. Businesses also know their "Whats." What each employee

does. What customers buy. What a product costs. What profit or loss results from a sale.

3. And companies know their “Whens.” When does an employee show up for work? When did a customer buy something? When was a transaction with the company conducted?

But there are missing pieces, including WHY and WHERE. A few ambitious teams have focused on answering the “Whys”, but with minimal success. One reason getting to “why” has been so difficult – and why translating individual productivity into commensurate group gains has been elusive – is the paucity of data for a fourth important dimension of enterprise information: Where.

Quite simply, the explosive atomization of the enterprise has outpaced our ability to keep track of people, places and things; and to be sure assets are deployed optimally. But the same technologies that enabled the atomization of the enterprise, now generate the data that will power the next wave of productivity gains: proximity.

The fourth dimension of enterprise information – where proximity awareness starts to answer the “where” questions – connects the digital abstractions of who-what-when with the physical world where people live and work, machines get dispersed and business gets done.

This data is vast, rich and available – every smartphone can report location dynamically to a proximity-sensing service. Every internet-connected device able to report location and contextual data can do the same. Myriad location data emitters, for either absolute or relative position, can provide precise, consolidated knowledge of who or what is where, allowing you to define when and how location matters.

Proximity Opens Vast New Opportunities

Enriching corporate data with proximity awareness pushes several things forward. Beyond simple location, knowing where your people, inanimate assets, suppliers, supplies and customers are; and when their joint movements are actionable, allows

automated responses to specific conditions of convergence and divergence.

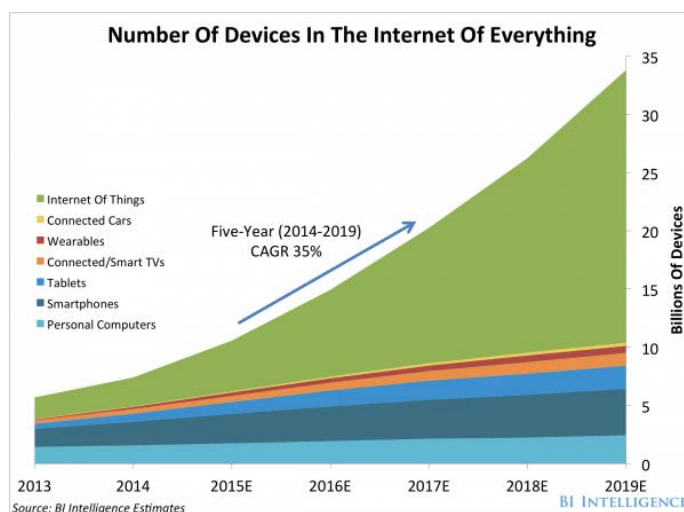
Smart Proximity Technology transforms mobility disruption into a valuable new asset.

Standardizing proximity services in an open platform lets you track people and assets in motion; determine when any two or more of them are converging or diverging; and act by triggering proximity-aware messages or instructions. This helps organizations immediately improve individual productivity and glean a new understanding of how constituent populations migrate in ways that affect efficiency, revenue, profitability, efficacy and agility.

Can you answer questions such as:

- Are your service personnel deployed closest to where demand tends to originate?
- Can you quickly locate all of your distributed and portable equipment?
- Are your billboards placed where your best prospects and customers travel?
- Do you know where your retail customer shops before coming to you, and where they go afterward? If you did know this, would it make a difference how you market to them? If you're Target operating a store in a mall, would your offers to a customer who came to you after shopping at Tiffany and before stopping at Ferragamo be different than what you'd offer a customer who comes to you from Wal-Mart and proceeds next to a Nike store?
- Would your campus emergency managers reduce panic and boost safety if they could tailor their communications during emergencies to people based on proximity to the event?

These are but a few isolated instances. Throughout our economy, there are mobility, movement and migration phenomena that—if



Source: [Business Insider](#)

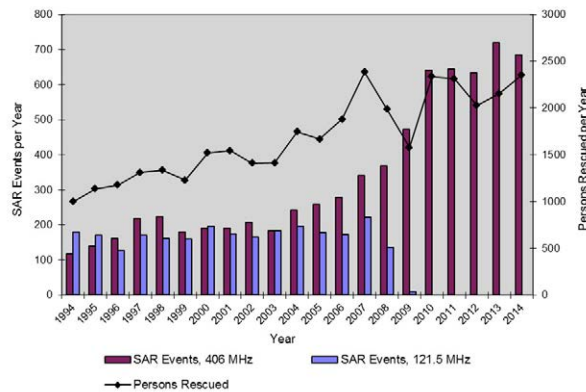
they were better understood and used as cues for automation or semi-automation—could remove friction from commerce; shrink delays in responsiveness; reduce costs; and accelerate new ideas, products and methods.

Whether your objectives pertain to security, efficiency, service, quality, speed, profitability, satisfaction or any other measure of effectiveness, proximity awareness can drive performance and productivity for everyone.

Smart Proximity Awareness delivers practical solutions to optimize people and assets, increase accountability, and generate measurable business results across multiple industries and functions. It reduces errors, lowers risk, lessens liability, streamlines workflows and improves efficiency.

A few examples of what it can do:

- Guide: Provide critical site orientation and wayfinding for employees, partners, customers and prospects attempting to navigate large corporate, healthcare or institutional campuses.



Source: [Earth Observation Portal](#)

- Direct: Send critical equipment or expertise to where it is needed—at the right time.

- Inform: Send guidance or other messaging to individuals, groups, audiences, subsets or other populations for multiple purposes – from entertainment to emergencies. Send customized alerts/notices to subsets of people in large gatherings.

- Secure: Create a smart, proximity-aware security layer for validating remote credit and debit card transactions or access rights.

USE CASE SCENARIO WAYFINDING

Smart Proximity Awareness technology transforms a standard campus (shopping complex, medical center, etc.) into a Smart Campus. It does so by providing timely information and instructions to individuals, groups and defined subsets based on who and where they are, to guide them to where they need to be.

For example, any organization with a large campus can use Smart Proximity Awareness to help employees find specific rooms, facilities or co-workers to improve collaboration and overall workplace efficiency. The possibilities are almost limitless:



- New employees, or those unfamiliar with a particular campus or area, will receive rapid, real-time help getting to a meeting location, finding the closest place to have lunch, or locating needed assistance.
- Consumers visiting a shopping complex are provided with helpful information to quickly locate the products and services they came for, along with related offers and information of potential interest.
- Patients and visitors at a large medical center receive guidance on finding the appropriate offices and services, thus speeding and improving their healthcare experience.

- Enhance: Improve customer experience, engagement and satisfaction by providing valuable information, suggestions, recommendations or discounts in specific circumstances.
- Report: Provide valuable trend analysis, reporting and predictive capabilities that can help future planning and decision-making.
- Protect: Route staff, guests, members, students, patients or others to safety in emergency situations. Direct people to the least congested, most efficient exit.
- Take other actions to discover, monitor, remind, navigate or confirm.
- See Part III of this report for a variety of detailed use case scenarios.

Smart Proximity Awareness Makes Mobility an Enterprise Asset

Thanks to mobile device saturation, almost everyone is now a high-powered data source constantly transmitting geo-spatial

Proximity awareness technology can locate the right medical personnel and equipment for quick and efficient deployment.

and time-series information. This phenomenon offers vast value-creation potential for companies and organizations of all kinds.

USE CASE SCENARIO SAFETY & SECURITY

Smart Proximity Awareness provides a new type of mobile security system that is quickly adaptable and can be dynamically optimized to locate and direct people to safety in an emergency. For institutions with large, diverse and dispersed populations (university campuses, for example), this turns the chaos of an emergency into a “routine” exercise.

A Smart Proximity solution provides customized messages and instructions to specific groups of individuals based on who—and where—they are. University faculty and staff close to an emergency epicenter receive a message with guidance for the best route to safety, while those outside the emergency zone could receive a message to avoid the area.

You can send similarly segmented messages to students, staff, visitors or others based on who and where they are and the outcomes the university wants to achieve; such as clearing an area or directing help to where it is needed.

Security applications are highly flexible. For example:

- An auto-response could be triggered when someone is close to a predetermined place, so they receive clearance to enter (or a warning not to enter), along with information to make their visit more productive.
- A financial services provider could more accurately predict the authenticity of remote credit or debit card transactions, based on better and faster knowledge of the cardholder’s whereabouts.
- A major utility or other large corporate facility that’s a potential terrorism target can create a Smart Proximity app to send real-time alerts of unusual activity and report/coordinate an efficient, immediate response to any threat.



Smart Proximity technology combines advanced location intelligence, state-of-the-art mapping technology and real-time data from multiple types of location signals in an open, extensible platform that makes mobility more manageable.

It's two-way, real-time communication that helps you see and predict activities and events, gain insight, take action and achieve desired outcomes.

In short, Smart Proximity Awareness puts you in control. It lets you create customized solutions for specific business or organizational problems you've identified, works via your existing app and allows you to customize rules, triggers, attributes and messages to meet any goal. User attributes, for example, can be quickly defined from a dashboard or integrated via API.

This kind of attribution – the ability to identify, segment and individually message people and equipment based on a wide

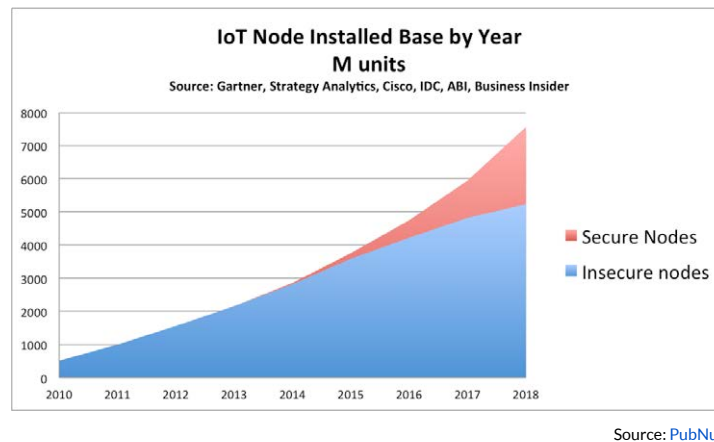
range of attributes – is a powerful component of Smart Proximity Awareness. It provides never-before-seen capabilities to send highly customized, proximity-aware messages based on specific rolls, employment/enrollment status and clearance level, among others.

Managing Mobility at Scale

Mobility by itself, of course, isn't new. What is new is how frequently people and things are mobile, how far afield they are roaming, what they

are able to accomplish while mobile, and the sheer scale of that mobility. Smart Proximity technology can unlock huge new value-building opportunities by harnessing data from:

- Nearly 5 billion mobile phones now in use
- An estimate 20 billion trackable devices and objects in IoT by 2020



USE CASE SCENARIO EMERGENCY PREPAREDNESS

When a major, large-scale emergency of some kind occurs, hospitals, other medical facilities and emergency service providers face huge challenges to quickly locate and assemble the proper medical personnel and equipment.

Smart Proximity Awareness provides a dynamic new way to get the right messages to the right personnel in order to respond to the emergency; to keep people safe and save lives.

A Smart Proximity solution puts all of the pieces in place to mobilize a speedy response and send customized alerts, instructions and other information to certain types of doctors, technicians and various early-responders. The system can know with great precision which tagged-assets are needed, where they are currently located and who is closest to them.

With this kind of quick and coordinated response, emergency service providers will greatly improve results and do so cost-effectively.



- Over 200 million places on the globe (geo-locations) fully indexed in Google by 2020, including buildings and other structures.

In addition, the launch of super-fast (10x 4G) 5G communications over the next several years will dramatically increase the number of emitters sending signals to smartphones and IoT-connected devices. Wireless companies will be installing thousands of small new base stations to pass along the 5G signals.

As Smart Proximity ushers in the next phase of enterprise mobility management, organizations will have new tools to improve productivity, security, safety, responsiveness and customer experience.

DID YOU KNOW

Experts Estimate Over 1 Million Work-Related Fatalities Each Year

Source: [International Labour Organization](#)

Imagine a world where mobility and proximity can help to save lives, improve efficiency and elevate customer experience. Sixgill is at the forefront of the exciting intersection between people, places and things. The IoT landscape illustrated by our innovative customers, has shown us that we are at the precipice of a new era of safety and compliance through mobility.



PART II

Smart Proximity is Creating Real Value in the IoT Universe

The Internet of Things (IoT) has received massive attention in recent years as sensors embedded in or attached to all manner of devices become connected via networks to computing systems.

McKinsey & Company predicts that if policy makers and businesses get it right, this linking of physical and digital worlds could generate between \$4 trillion (their low estimate) and \$11.1 trillion per year in economic value by 2025. And the bulk of that value—nearly 70% of it, says McKinsey—is expected to come from B2B applications, including areas such as heavy industry, construction and of course manufacturing; where IoT technology helps optimize equipment placement and maintenance, improve safety and security, and much more.

Smart Proximity Awareness Technology will play a critical role in how enterprise organizations extract value from IoT or, more

accurately, IoE – the Internet of Everything. It's really IoE because the value creation chain includes more than just things. It also involves people, data streams, locations, communications and more, all connected to the Internet.

Smart Proximity Awareness is what brings it all together into a cohesive cyber-physical system that can be analyzed and acted on to solve problems, optimize time and improve productivity.

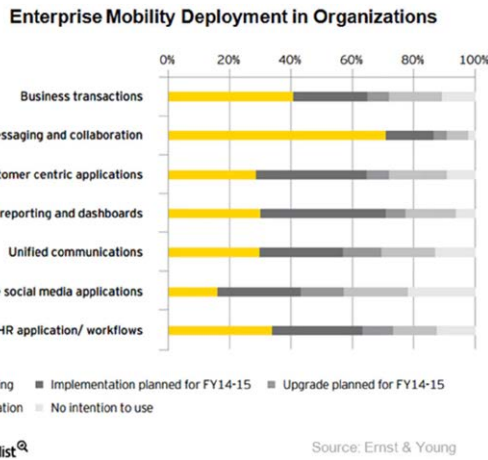
Proximity Makes IoT Work

Many companies already generate large amounts of data from IoT but only use a tiny fraction of it. That's because they focus almost exclusively on detecting breakdowns or other anomalies, rather than envisioning other uses.

With Smart Proximity Awareness, companies will realize much greater value from IoT by using it to predict and optimize a wide

range of activities. This might, for example, include heavy industry use cases for coordinating large concrete construction projects, or similar time-sensitive endeavors involving expensive equipment and complex coordination of people, places and things.

Enterprise IT leaders are now envisioning a wide range of proximity awareness applications by setting aside traditional mindsets around mobility and location, and thinking instead about ways to uncork its potential.



these new IoE networks, and managing “interoperability” — defined as “the ability of machines, devices, sensors and people to connect and communicate with each other via IoT.”

Building systems and solutions as vertical silos and operational islands inhibits the ability to gain strategic value from IoT. Smart Proximity Awareness lowers barriers and makes it easier to integrate all of the pieces into a single whole that is

easy to operate, expand and maintain.

Harnessing IoE is a strategic enterprise investment that could radically change how many companies compete. Now is the time to consider the business opportunities at hand, set a vision and establish ways to apply Smart Proximity Awareness.

In many industries, people and equipment are dramatically more dispersed than ever before.

Growing Complexity Creates New Challenges

As the world becomes increasingly networked with nearly everything linked to everything else, enterprise faces an explosion of complexity. For example, production and supplier networks are expected to grow enormously, which means manufacturers will need to coordinate more global suppliers. At the same time, boundaries that now separate individual factories and other facilities will be eliminated as IoT and proximity awareness connect multiple factories and regions.

Other challenges include the need for greater IT security across

USE CASE SCENARIO DISTRIBUTED INFRASTRUCTURE

In much of enterprise today, people and equipment assets are more dispersed and mobile than ever before. Smart Proximity Awareness ensures that greater mobility translates to improved productivity and greater enterprise value. For example:

- A global engineering company can optimize efficiency and security of a large infrastructure construction project by better managing loads via an app used by drivers, service people and others.
- Similarly, a utility company can speed up maintenance and repair of facilities from power lines to pipelines. Smart Proximity will detect and report trouble, and then assemble the best people and equipment (those closest and/or with the right skill sets) to fix the problem.



Start with the Problems

To get underway, organizations must first identify the problems they want to solve; then define the proximity solutions that can address those problems. Because Smart Proximity Awareness is highly flexible and extensible, it can be applied to hundreds if not thousands of different use cases. These range from heavy industry and construction to banking, transportation, retail, healthcare, emergency services, and many others.

The rate of IoT and Smart Proximity Awareness adoption will accelerate quickly. To stay ahead of the curve, enterprises must create an IoT plan that clearly identifies how it can become a differentiator for the company and improve organizational alignment and interoperability, while generating valuable new proximity data that informs future planning and strategies.

DID YOU KNOW

One in six IT projects have an average cost overrun of 200% and a schedule overrun of 70%.

Source: [Harvard Business Review](#)

Sixgill Professional Services can help you develop the proximity strategy to give your organization the competitive advantage it needs in a highly competitive environment. Sixgill product strategists have a history of developing, orchestrating and overseeing powerful and innovative strategies—on-time and under-budget.



PART III

Smart Proximity Enables Greater Control of Mobility

Location and “proximity” differ greatly. GPS location data by itself is static, one-dimensional and non-predictive. Proximity awareness is dynamic, intelligent, and far more sophisticated and powerful. It ingests vast amounts of location data and creates valuable, actionable insights. In essence, data becomes the currency that “pays” for the services made possible by Smart Proximity.

Smart Proximity technology is easy to access and can dynamically trigger contextual, rules-based actions and communications in ways never before possible; allowing you to reach the right people, at the right time, with the right information.

Smart Proximity Uses a Hybrid Sensing System

Smart Proximity employs a vast, multi-device, multi-technology sensing system to track who’s close to whom or what, and

when, determining when a predefined “proximity event” occurs (someone or something enters or exits an area for example), and triggering an appropriate response.

People, devices and objects can be registered, identified and segmented in numerous ways, such as their specific role, security clearance, management status, employment or enrollment status, schedule (for example, they should/shouldn’t be where they are), and many others.

Actions are triggered by the “proximity events” you to define for your specific need, such as when people move closer or further from other people, places or things. Managers can control these actions from a Smart Proximity dashboard, or actions can be automated, or a combination of both.

Scale is nearly limitless. Alerts can go to single individuals, groups

or populations of almost any size based on a wide range of attributes or characteristics.

What's more, this builds a valuable historical data record over time, that can be analyzed to understand patterns, improve accountability, optimize schedules or other operations, and raise revenue.

Superior Flexibility and Long-Term Value

Traditional proximity awareness has been narrowly focused on "vertical" solutions. But such solutions are born with handcuffs that limit their flexibility, extensibility and scalability; and prevent them from having broader uses in the future, or giving an organization a unified view of its mobile population behaviors.

Vertical approaches tend to be quick fixes for the problem du jour, and may simply be "Frankensteined" together from various technologies. They lack capabilities to address longer-term needs or a broader range of problems across the enterprise or organization. They are

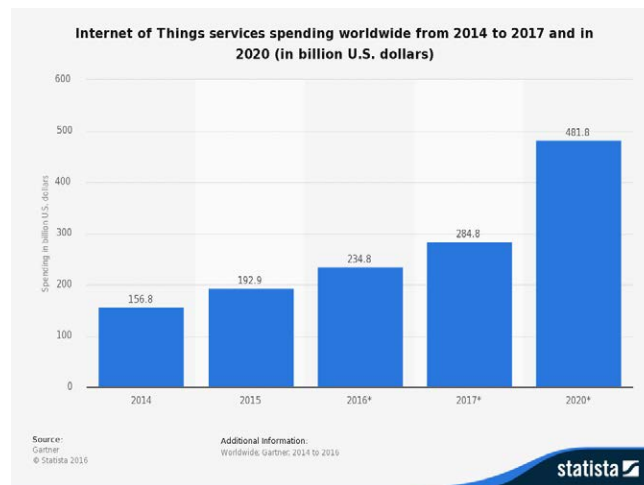
complicated and expensive to build, prone to early obsolescence, and can be nearly impossible to maintain over time.

What's more, vertical solutions often have built-in constraints, such as the ability to recognize location signals from only a single source type.

A horizontal platform enables common support for all specialized applications that benefit from proximity enablement. It lets you build on one technology backbone through a single gateway partner, and accumulate a common history of all your mobile populations in one place.

An extensible proximity awareness platform can support deployments requiring behind-the-firewall installation. And as an open system with documented APIs, it can interface with and exchange data with nearly any other enterprise system.

A horizontal platform can function as a general purpose tool that allows you to build multiple proximity related applications, as well as an



Source: Statista

USE CASE SCENARIO SCHEDULING & COLLABORATION

Optimizing schedules is one of many uses where Smart Proximity Awareness really shines. For example:

- A commercial solar developer with a large force of field reps can use Smart Proximity Awareness to ensure that individuals are deployed in the most effective way to where they are needed, and are able to collaborate quickly with co-workers, customers, partners and IoT-equipped installations.
- A big global consulting company with thousands of employees dispersed all over the world can better coordinate work effort of its employees, partners and other assets.
- Shippers and delivery companies would love to know where a recipient who needs to sign for a shipment is located in relation to the delivery truck as scheduled delivery time approaches. Smart Proximity Awareness provides just such capabilities.



USE CASE SCENARIO

CUSTOMER EXPERIENCE & MARKETING

Smart Proximity Awareness Technology helps financial services firms, retailers, entertainment companies, airlines, airport operators, large commercial landlords, travel services providers and other businesses enhance customer experience in new and exciting ways.



With it, you can understand customers more completely than ever before by “connecting the dots” of their likes, preferences and movements based, for example, on where they were prior to arriving at your location, or where they went afterward. This knowledge alone speaks volumes about what kind of customer they are, and the specific offers, information and experiences you should provide to them.

You can do this from your own app without having to rely on social media outlets such as Facebook and others.

New Tool for Commercial Landlords

As one example, Smart Proximity Awareness gives large commercial landlords an enticing new value-added service to offer tenants. A shopping center can offer commercial tenants valuable customer movement analytics about where people shop, eat, and seek entertainment, via a venue-wide app.

Smart proximity provides mobility trend information about everything that’s going on in the shopping center environment. Such information brings new insights into customized experiences that can be offered based on what people come for, look for and do.

Travel-related businesses – from travel-booking websites to airlines to airport operators – can use Smart Proximity Awareness to enhance the travel experience for their customers. Instead of sending “dumb” update messages about changes or delays, they could deliver smarter, more targeted and useful messages based on the traveler’s actual proximity to, say, the airport or other locations.

“ingredient brand” that can be integrated into specialized proximity awareness solutions.

The platform’s inherent “layerability” fosters far greater innovation in developing the proximity solutions of the future.

Benefits Abound for Large Organizations

Smart Proximity Awareness technology can benefit any organization or enterprise with a large employee, customer or student population, or an enterprise with high-value assets that are dispersed and mobile. This includes manufacturing,

construction, engineering, healthcare, complex regional systems maintenance, industries with large-scale facilities, large-scale retailing, large campus emergency management, geo-located financial security verification, and many others.

Smart Proximity triggers delivery of contextually relevant messages, content or instructions. As it does so, it builds a record of whether people or things were present at specific places at specific times, which can be combined with duration knowledge to infer activity.

It can show how mobile populations behave over time; deduce

where people live; what neighborhoods they frequent; study response times and deployment efficiencies, among other things.

When people or things enter, exit, or dwell within a designated area (a “landmark”), a Smart Proximity solution takes the right action, whether that’s for one event, or millions. This includes

Applying analytics to proximity awareness data can provide valuable new insights into the movement and complex relationships of people and equipment over time.

“non-directed” actions where information flows back to another device or system, rather than to the device that first generated the information. For example, off-duty officers in the area of an emergency generate notifications back to an Emergency Management System.

Smart Proximity Awareness offers a wide range of benefits to companies and organizations, including the ability to:

- Track and verify that people and assets are in the locations where they are supposed to be, or where they are needed the most.
- Manage and message crowds or groups in emergency situations, including the ability to segment groups based on specific attributes (who or where they are in relation to what’s happening) and send them customized messages.
- See trends and analyze group or individual behaviors over time. Gain valuable insights from macro analysis of behaviors and migratory patterns in employee, customer and mobile asset populations.
- Send automated responses to changing proximity situations, triggered by predetermined rules and events that are established for your specific goals.
- Generate improved efficiency, cost savings and profitability by optimizing schedules and coordinating work efforts among both people and equipment, and delivering new, highly-customized customer experiences.
- Detect, redirect and/or reorient people and things based on their location – including, for example, groups or subsets of

USE CASE SCENARIO

TREND TRACKING & REPORTING

Smart Proximity Awareness technology lets you track trends and analyze group or individual proximity over time. This provides valuable insights into behaviors and movement patterns of employee, customer, partner and mobile asset populations. This helps you:

- Build long-term strategic value via the predictive capabilities of accumulated mobility/proximity data.
- Understand movement patterns of groups or individuals; predict future ways to connect and optimize. The more data you analyze over time, the better you can be at predicting events.
- Optimize processes by knowing historical patterns of where people are and how they move around.

A grocery store, for example, could better optimize its stock by using data about where people were before they came, and where they went afterward. If they know a customer often goes to a cheese store before buying groceries, they might consider improving their own cheese offerings.



people attending a large event, based on attributes such as the type of ticket held, or their proximity to services, exits, etc.

- Manage proximity awareness initiatives easily via a dashboard that shows complete details of devices (people and things), events (i.e. triggered actions), landmarks (i.e. a point/pin on a map, geofenced area; Wi-Fi and others), reporting and more.
- Retain flexibility to message all devices, specified groups, or a single individual; see location and event history; monitor battery strength of registered devices; and set events to run for any time period across multiple event types such as: enter/exit area, speed, in area/out of area, battery level and others.

Proximity Capabilities Give Organizations an Edge

Smart Proximity Technology provides companies and organizations new ways to manage mobility, define new strategic differentiators and gain a competitive edge. To deliver maximum long-term value, a proximity solution must encompass a wide range of capabilities and be a full-scope provider.

For example, it must work with your existing devices, data and systems, and be equipped with the industry’s most sophisticated location assessment capabilities. Other best-in-class Smart Proximity Awareness components and capabilities to look for include these:

An Open, Extensible, Easy-to-Access Platform Works Best

Only an open, API-accessible platform has the capability to meet both current and future needs by serving as a multi-purpose “backbone” on which you can build a wide range of proximity applications.

Smart Proximity technology must work with existing as well as future enterprise systems and location technologies. It must be able to use custom sensor and content inputs, and integrate with internal enterprise systems (a CRM for example) and third

party services for dispensing information. And it should deploy lightweight SDKs that easily integrate into an app to manage device location while saving battery life.

Advanced Location Assessment is Emitter-Agnostic

To determine (or sense) location as quickly and accurately as possible, Smart Proximity Awareness technology deploys multi-device capabilities to detect signals from multiple types of location signal emitters. These can include GPS, Wi-Fi, cell networks, Bluetooth beacons, RFID and others. Multi-source location data input provides superior results to single-source systems that rely on only one type of signal.

Location assessment should also include the ability to augment location accuracy via various methods, such as calculating relative signal strength. Devices that can’t get a good signal (i.e. a good GPS signal) can leverage data from other devices that were there previously and that had better GPS capabilities, thus allowing the weaker ones to fix a location. This is a benefit of being part of a single “multi-tenancy” system.

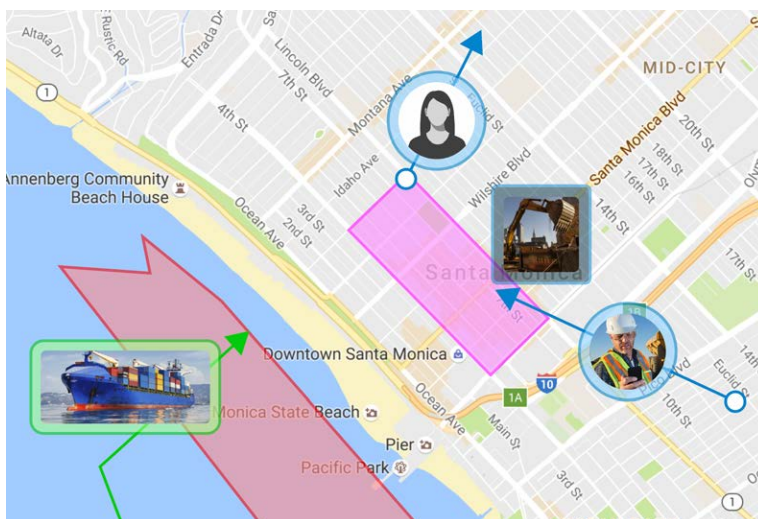
Sophisticated Geofencing Improves Targeting

The ability to create sophisticated and flexible virtual boundaries, or geofences, to designate real-world geographic boundaries is a core competency of Smart Proximity Awareness. Geofencing capabilities should include everything from extremely broad (cities, regions, countries), to highly granular (a neighborhood, campus, individual building location within a single building).

Geofences should also allow for inclusion of regular shapes (circles, squares, rectangles) as well as complex polygons and exclusion zones.

Flexible Triggering Capabilities Can Adapt to Any Situation

The ability to trigger a highly targeted message, action or activity is a key benefit of Smart Proximity Awareness. The proximity awareness engine should provide you complete



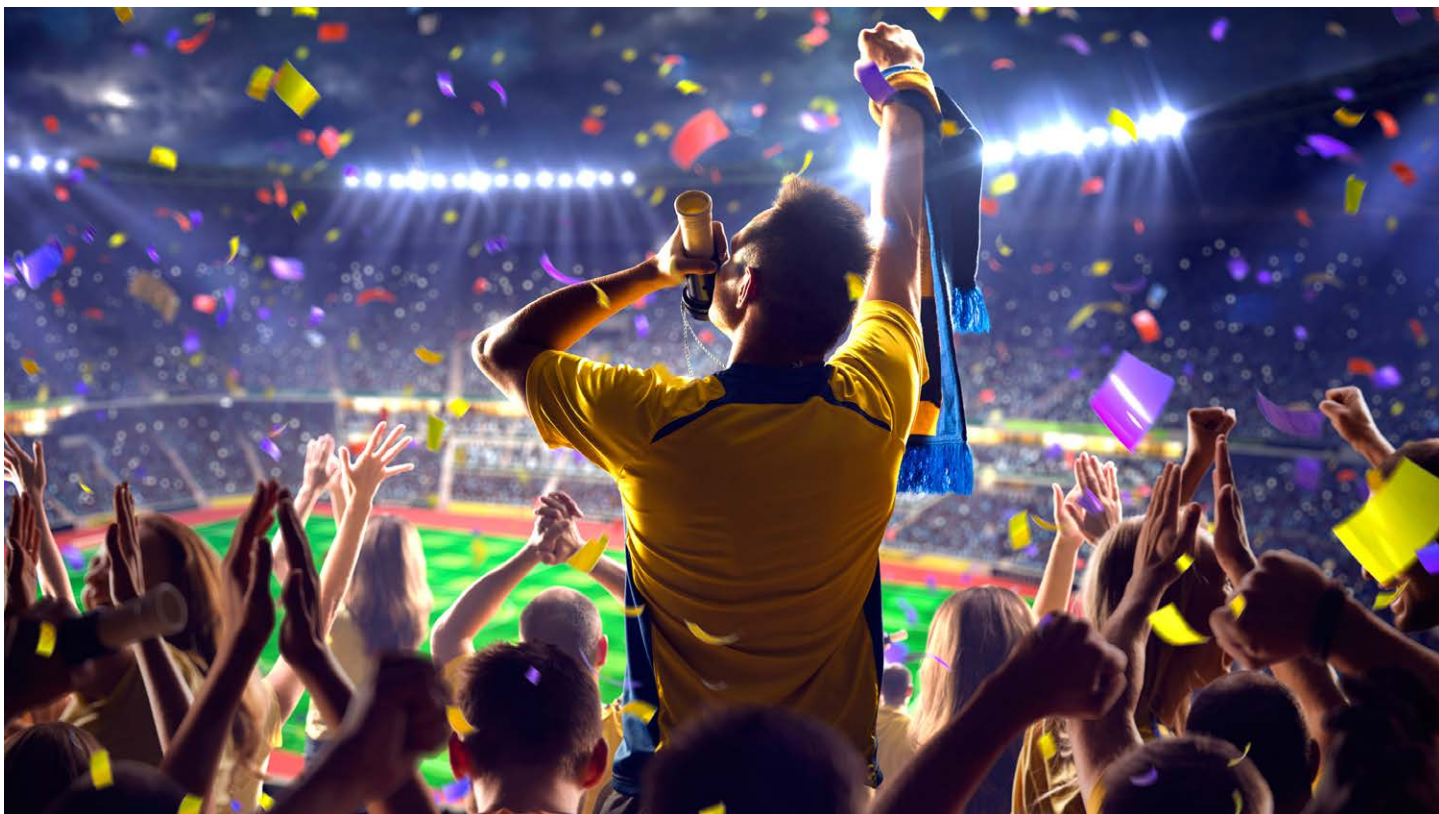
Source: [Sixgill](#)

control and flexibility to set the conditions – the events or “rules”—that determine exactly when, where and how the trigger is pulled (message sent; action initiated), based on your goals and desired outcomes.

The potential combinations of triggering events (entering/exiting an area, for example), individual attributes (skill sets; clearances), and possible groupings (one to thousands) are almost endless.

Real-Time Operation Makes Impact Immediate

Because Smart Proximity Awareness uses real-time data processing, you can monitor movements in as close to real time as possible, and take immediate action to achieve your business goals.



PART IV

How Smart Proximity Awareness from Sixgill is Leading the Way

Sixgill's highly flexible, scalable and market-proven Smart Proximity Awareness platform lets enterprises and other organizations track the key people, places and things that matter to them, determine proximity and intent, and take action to drive business value.

The cloud-based technology analyzes vast amounts of location and sensor data, converts it into actionable insights and has already triggered more than 25 million context-sensitive actions for customers.

Solutions include:

Proximity for people: Trigger messages to employees based on their location.

- Proximity for assets: Track assets as they are being manufactured or moved from place to place.

- Proximity for crowds: Direct event attendees toward optimal travel routes to decrease congestion and improve their experience.

Flexibility and Scale

Sixgill Sense – The Proximity Engine for Enterprise – improves control anywhere an enterprise has mobile resources vital to its business. By building on its flexible and extensible backbone and using the Sixgill Reach mobile SDK to connect your mobile app to Sixgill Sense, you can avoid the need for specialized (and expensive) location equipment.

SIXGILL
sense™
———— The Proximity Engine for Enterprise ————

USE CASE SCENARIO

LIVE EVENTS

For event organizers, large venue owners such as stadiums, arenas and convention centers, and anyone else responsible for managing large, live events, Smart Proximity Awareness offers new, highly efficient, real-time communication opportunities to improve safety, security and patron experience.

For example, it will direct attendees toward optimal travel routes to decrease congestion and improve customer experience. The technology can also provide valuable data on audience mobility before, during and after an event.

Not only does this offer new ways to optimize experience – and revenue – it also provides valuable insight that informs strategy, planning and future decision-making.



Sixgill Sense can also incorporate any location-emitting connected devices or sensor-equipped assets. And the open API integrates with your existing applications, data repositories or other third party tools.

Graphical depiction of multi-source location awareness with agnostic support for mobile, IoT and beacon emitter types.

Unique SpatialVector™ Technology

Smart Proximity Awareness at Sixgill uses proprietary SpatialVector™ technology to act on the dynamic relationships between devices, people, location landmarks, and complex geofences. This technology offers unparalleled capabilities to:

1. Provide real-time tracking of dynamic objects, such as people with phones and wearables or machinery with 3G-enabled Arduino devices.
2. Make complex determinations and conditional evaluations on this wealth of data.

3. Act on this data with messaging, push notifications or via other customized methods.

A Lightweight SDK Saves Battery Life and is Easy to Deploy

Sixgill Reach – a lightweight, battery-friendly SDK – turns an enterprise mobile app into a two-way proximity-informed app that's able to send location for proximity analysis that can then trigger relevant communications.

The advanced technology uses multi-source location awareness for maximum accuracy and effectiveness, including GPS, cell networks, Wi-Fi access points and Bluetooth beacons. New ways of determining location will be added as they become available.

Whether the use-case calls for a message to a user, a critical piece of information logged into a corporate database, or an alert placed in another enterprise system, Sixgill Sense can handle it. Trigger a push notification, send an email, serve content, log data into your CRM system, and much more. Customize messages singly or by group with sensed or assigned variables.

Give Your Organization a Proximity Edge

Take the next step to gain a Smart Proximity Awareness edge for your organization. Sixgill Professional Services can help supercharge your IoT #proximity strategy.

[Contact us](#) for more information or a demo, or visit [Sixgill.com](#).

DID YOU KNOW

Sixgill Professional Services can help supercharge your IoT #proximity strategy. From concept to design, architecture to implementation, Sixgill is the missing piece to your global innovation puzzle.

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