




IoT **WITH** SALESFORCE 1 PACKS **A PUNCH!**

With IoT Applications roped into the Salesforce1 platform, businesses are set to get closer and more connected to their customers.

There are a plethora of possibilities when it comes to IoT powered apps. With Salesforce1 coming into the picture, IoT innovations will get a completely new dimension that was hitherto unexplored. The result—a never before unified experience for the customer! And Salesforce1 is already on the path to making it a dream come true for businesses across the globe.

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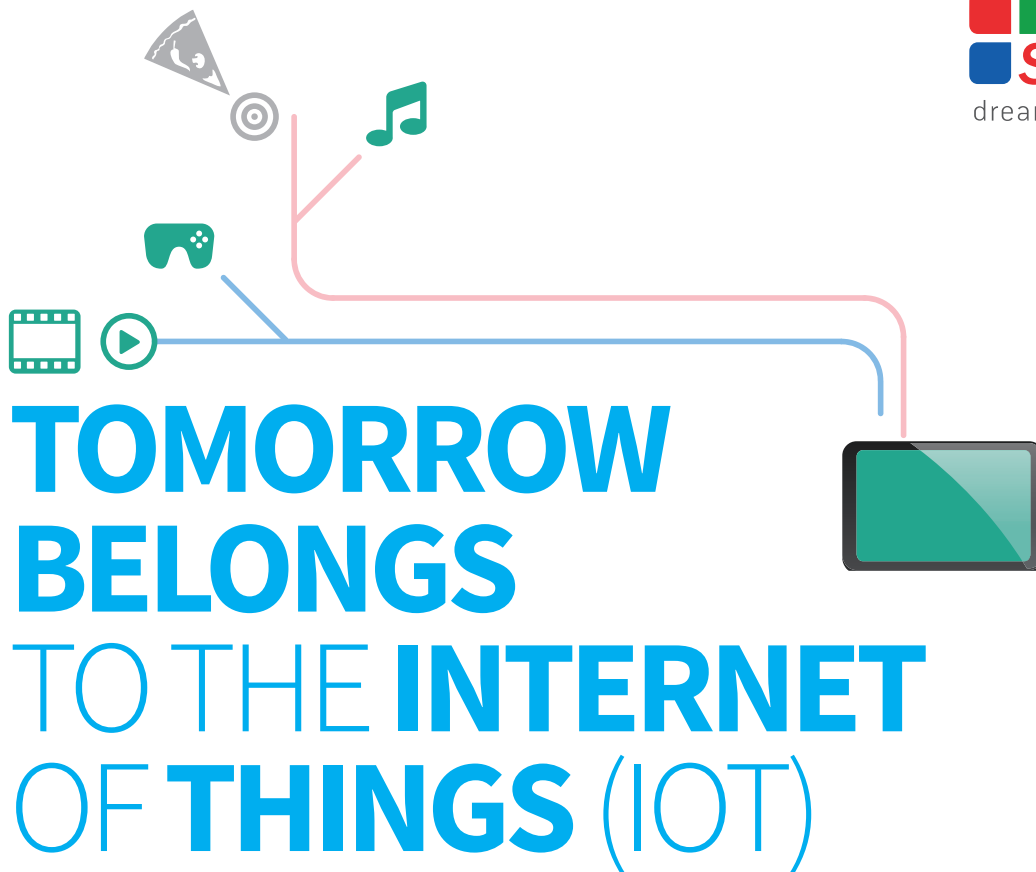
INTRODUCTION

MOBILES AND THE INTERNET OF THINGS

The mobile revolution is here to stay. At present, over 95% of the population in the U.S. is connected wirelessly by mobile phones. By 2015, more than 10 billion tablets will be accessing the Internet; a good indication of how radically the number of tablet users is growing.

A big reason for the tremendous growth and deployment of mobile devices and cloud computing, which facilitate the spread of mobility, are businesses across sectors taking note of the potential financial and competitive advantages that the mobile offers. Businesses have already leveraged such devices to connect employees to the office from everywhere, be it trains, oilrigs, homes or airports.

However, devices such as smartphones and tablets go much beyond offering the convenience of mobility. Thanks to the ever-increasing computing power, cloud storage capability and bandwidth, the world is moving towards a pervasive computing environment with near-total “ambient” communications and intelligence that would facilitate unobtrusive access to information in real time. The possibilities that stem from accessing and using such information are endless, limited only by imagination.



The next big leap in technology is the Internet of Things (IoT), which is poised to take mobile computing to a new level. Devices and gadgets, embedded with microchips, have started interacting with their “customers”.

Powered by a new generation of mobile hardware and software solutions, IoT has the potential to introduce game-changing possibilities that will reshape workflows across domains and throw open possibilities that were unimagined before.

The IoT revolution is already underway. Millions of new products and devices are connecting to the Internet on a daily basis. Gartner estimates that by 2020, over 26 billion “things” will be connected. According to International Data Corporation (IDC), the impact of such connected devices would grow to \$7.1 trillion in 2020, from the current \$1.9 trillion, and have a bearing on every aspect of the business.



Major software applications have already moved away from the desktop and into the cloud. Empirical evidence suggests that the PC, as we know it today, complete with hard drives, will become obsolete in a decade. The replacement would be cloud-based servers, with apps serving as the interface between such servers and mobile computing devices.

Hitherto, the need for continuous wireless connectivity had a major restraining force on the spread of cloud-based servers and apps. However, technology is fast conjuring up a work-around for users with intermittent or unreliable communications. Many apps are now configured with a local element that facilitates continued work and synchronizing when reconnected to the net.

When it comes to IoT, behind every connected entity is the possibility of an app or a series of apps, which takes data from the sensors embedded in it, or offers instructions to the sensors.

Using data from sensors, apps now make it possible to undertake a wide range of possibilities; this could span from using a combination of smart thermostats and real-time weather forecasts to automatically set optimal temperatures for cooling systems, to turning on and off any device from across the world, and even tracking down lost keys or being alerted of a possible intruder at home when travelling.

A few other random applications gaining traction include:

- Cellular communication enabled Smart Belly trash, which collects data in real time to notify municipal services when a bin needs emptying.
- Smart lighting systems that offer the right level of lighting depending on the day, season, and weather conditions.
- Sensor-installed equipment that sends reports of performance and health of components to owners, facilitating prompt and efficient storage.
- Sprinkler systems that check local weather conditions before turning on.
- Door locks that automatically contact the owner when someone attempts to open it.
- Automobiles that self-diagnose by identifying the problem and the solution with precision.

Such initiatives and possibilities notwithstanding, connecting an entity to its customer still remains a big challenge.

The following are big obstacles for app developers to develop apps that connect “things” to their “customers”:

- The fragmented nature of mobile space, with multiple operating systems.
- Lack of a single approach to cross-platform functionality.
- Inadequate tools to query and simultaneously browse cross-project.
- Data stored in multiple, often inaccessible repositories.

Salesforce1 offers a solution to the stumbling blocks, allowing developers to take IoT to a whole new level.



POWER OF SALESFORCE1

The new Salesforce1 Customer Platform is the first of its kind CRM platform that integrates social, mobile and cloud. It connects the product and the data residing in servers with developers, vendors, operational employees, service and support staff, sales and marketing employees, customers, users, and everyone else in the value chain, to optimize efficiency and unlock possibilities.

The Salesforce1 platform offers the ability to follow, share, collaborate and take actions directly on data within Salesforce1. Users can assimilate directly within the record feed and get notifications of changes in real-time.

- By integrating social to the mix, Salesforce1 makes it easy for different stakeholders to share updates, trigger workflows and indulge in various collaborations.
- For the developers, Salesforce1 platform offers 10X more efficient and scalable APIs and services, compared to the previous offerings, enabling them to build powerful social and mobile apps faster than before.

The various types of API—bulk APIs for data loading, advanced streaming APIs that assist in push notification integrations, social APIs that facilitate collaboration, and metadata APIs, which define permissions, field types, data access guidelines, and user experience—all have the power to achieve more than 1.3 billion transactions per day. These APIs make it very easy to connect the mobile device or wearable smart devices to the customer information residing in servers, to develop apps for personalized experiences.

Salesforce has revamped Heroku and ExactTarget along with the launch of Salesforce1. The new Heroku1 allows companies to build and deploy communities for custom facing apps, to connect stakeholders. ExactTarget Fuel allows companies to engage with customers on a one-to-one basis, at scale.

[In August 2014, Salesforce launched the Salesforce1 Community Cloud, which now enables companies to create trusted personalized destinations for their customers, employees and other stakeholders.](#)

These mobile enabled destinations come connected to the Salesforce CRM and business processes. Within the community, marketers can update leads and employees can build and escalate services cases, while customers get to review and rate products. A device-responsive design ensures that every member has access to information without any dips in performance, no matter what the device is—a tablet, smartphone, or laptop.

The new Salesforce1 admin app, the world's first mobile app built for CRM admins, makes it possible to manage apps from anywhere.

Admins can now:

- Get updates from users instantly
- Reset passwords remotely
- Quick freeze and deactivate users when on the move
- Reset passwords remotely
- Access Salesforce maintenance and upgrade schedules directly inside the app
- Make all their existing Salesforce apps mobile, social and future-proof instantly

Salesforce1 goes beyond the making of IoT enabled apps easy. It also allows companies that have already invested in customer apps for their devices to deliver it to their customers in the mobile as well, promising a unified experience.

With Salesforce1, more than 10 million Visualforce pages and custom actions become mobile-enabled automatically.



The possibilities of developing revolutionary and life-changing apps using Salesforce1 are endless. Within no time of its launch in 2013, Salesforce1 had a robust ecosystem, with 16 independent software vendors having launched Salesforce1 apps, and another 125 vendors committing to do so in a short time. Since then, the numbers are increasing on a daily basis.

Many companies have already started embedding sensors and tracking devices into their products to get real time data on how, where and why customers are using the products. Marketers use such information to improve product parameters, offer better and faster customer support and fine-tune their marketing efforts.

For marketers and product developers, Salesforce1 mobile apps give users access to all CRM data, dashboards, custom reports, and every other connected information. Users can drill down dashboards using their smartphones to access actionable information in real time. It becomes possible to integrate such data to third-party visualizations to customize it fully, and make the data more actionable.

The following are some of the possibilities already realized:

- Major software vendors such as Evernote, Kenandy, DropBox and LinkedIn have leveraged the mobile-ready API tools available with Salesforce1 to roll-out engaging custom apps that cover the entire gamut of their functionality, and connect with customers and end users in a new way.
- MRI scanning machines now have API endpoints exposed to the Internet, which facilitates conversation between the machine and Salesforce. A Philips MRI machine, for instance, could use sensor data to flag machinery problems, and route such problems automatically to a Salesforce service cloud.
- Mapquest has integrated with Salesforce to allow users to search contacts based on their location. The app offers a map display, rollovers and proximity searches.
- Saaspoint's Mobile Field Scheduler (MFS) is an on-demand scheduling tool that allows users to manage teams of field service agents and their schedules using a single interactive console.
- Terafina's revolutionary new app empowers businesses to connect with customers, partners and employees in a new way. This app provides real-time visibility to all sales interactions, even while ensuring compliance and consistent disclosure delivery across branches and channels.

Such business applications apart, wearables create a new dimension in IoT innovations. Different kinds of wearables bring more devices, machines, humans and technologies closer. Some examples already realized or on the cusp of realization include:

- Infant monitors that provide real-time information on baby's breathing, skin temperature, body position and activity level to parents.

- Wearable alarm buttons that track the daily routine of dependent people ranging from children to employees and from prisoners to pilgrims, in real time. The connected app leverages the smartphone's accelerometer, gyro, video, compass, GPS, and connectivity options including mobile connection, WiFi, Bluetooth, and NFC to monitor movements, workouts, and locations round the clock.
- Ingestible pill sensors that come in contact with stomach fluid to communicate a signal that determines the time of taking medications. This information is transferred to a patch worn on the skin, for the doctor's reference. It also becomes possible to detect and communicate in real time vital parameters such as heart rate, ECG, body position and activity using wearable sensors.
- Acoustic real-time monitoring systems, which sense high-frequency stress waves generated by soil movement, calculate the rate of movement in real time and launch alerts to communities before a calamity occurs.

IoT innovation can help a wide range of domains including healthcare, retail, technology, government, education, finance, transportation, and more. Recently, Salesforce Ventures had announced an investment of \$100 million for businesses that are building new mobile apps and connected products using the Salesforce1 platform.

With this support, IoT is poised to spread its wings even further. Within a few days of launch, this fund has already invested in building apps for popular web services such as DocuSign and InsideSales.com, among others.

Of course the benefits are not restricted to convenience or the unlocking of new possibilities. As stated by a GE report on industrial applications for intelligent machines, efficiency gains of just 1% will translate to savings of \$30 billion, \$63 billion and \$66 billion over a period of 15 years for the airline industry, in global healthcare and for the global gas-fired power plant fleet respectively.

There are eight planets in the solar system, but an infinite galaxy beyond that. The allegory is similar to the potential of mobile computing when Salesforce introduced IoT. Just as only the human imagination limits the horizon beyond the eight planets, the galaxy of possibilities when it comes to IoT powered apps is infinite. The cycle of connecting more devices or more interconnectivity is virtually endless.

SUYATI TECHNOLOGIES

Suyati is a young, upwardly mobile company focused on delivering niche IT services to support myriad Digital Engagement strategies. Our expertise also includes integration and delivery of CRM, CMS and Ecommerce solutions. We are strong believers in Salesforce, and the life-transforming powers of IoT! Do visit our Salesforce page, or read our blogs on CRM.

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