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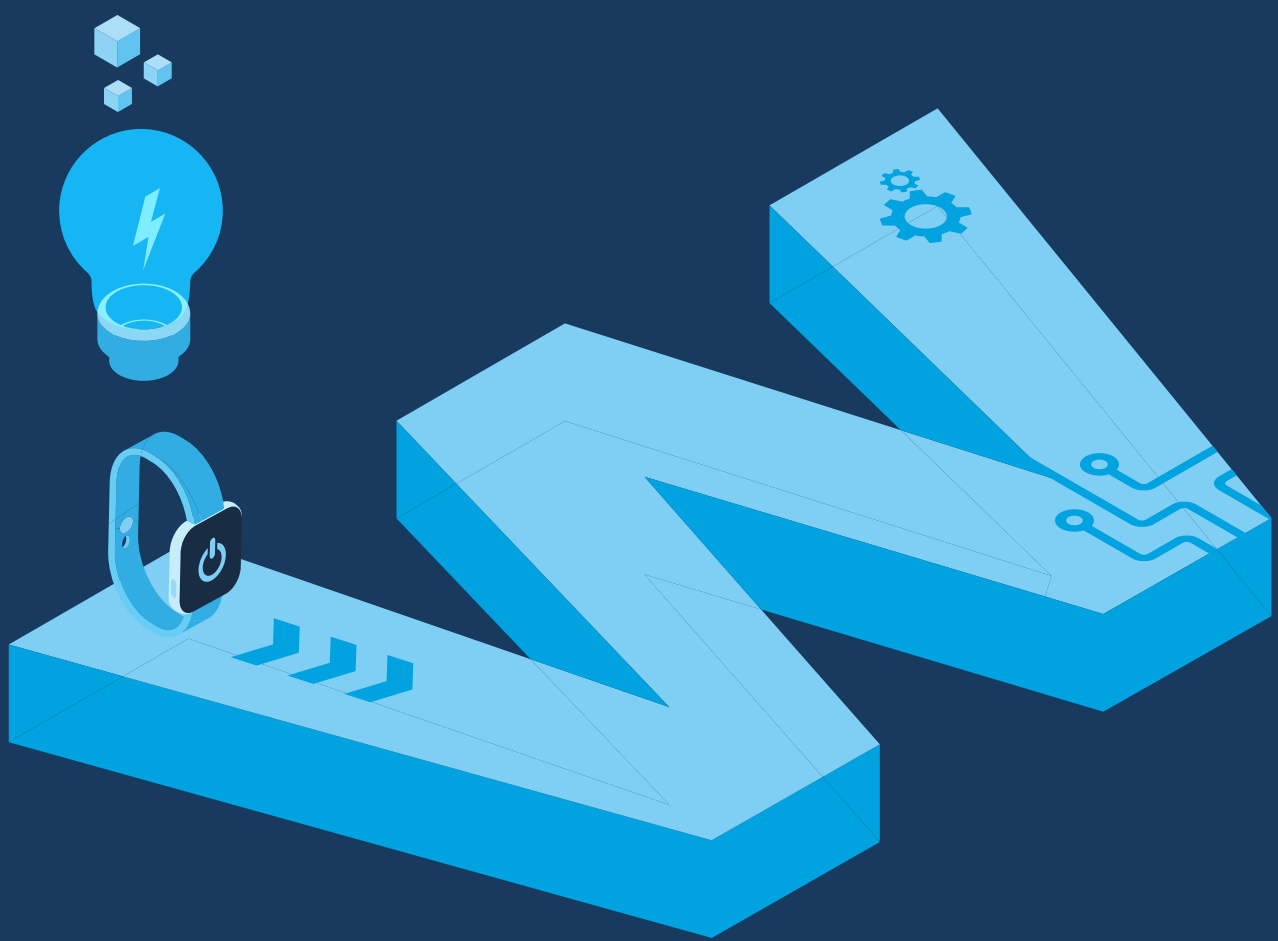
32 Killer Wearable App Ideas for Work



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4 Summary

1. Introduction

Wearables are set to revolutionize our lives. Gartner predicts that the wearables will be a $10 billion industry by 2016, with IDC estimating that 120 million devices will be shipped by 2018.

They will promote fitness, track goals, allow quick notifications on-the-go, and connect us to our homes from anywhere in the world. Wearables for work provide an even greater opportunity to significantly improve productivity, safety, and for the first time, provide industries including construction and manufacturing, the ability to put the power of the app revolution directly in the hands - and arms, and eyes - of workers.

This ebook describes 32 killer wearable app ideas for your workplace. They have been collated based on a year of discussion with thousands of Salesforce.com customers who are looking to leverage the Salesforce Wear Initiative to supercharge wearables in their workplace.

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Get started building wearable apps now, with open source developer packs available online.

2. **Wearable** App Categories

The 32 app ideas are divided into 8 broad categories covering all major industries. These categories define the overall focus space in which a wearable device may provide new opportunities for apps. Customers may use these categories to establish priorities for developing their own wearable initiatives.

2.1 Augmented Reality

The ability to leverage wearables, in particular glasses-type devices, to augment the physical world with instructions or contextual information provides endless opportunties for work. This is especially true in industries such as construction and manufacturing that have typical spent a small fraction of their IT budget on mobile.

Whilst frequently related to hands-free operations, augmented reality relies on the use of visual overlays for contextual information. As a result, augmented reality use cases need to incorporate new design paradigms and determine whether information is contextual only, or actionable, via either text-based commands, or other wearable devices.

2.2 Interaction

Personal computers led to a leap in productivity. Laptops and cell phones allowed workers the flexibility to work anywhere - their desk, within meeting rooms, and also creative collaboration space. Wearables make it possible for workers to interact with their office environment in new ways

2.3 Hands-Free

Hands-free interactions via wearables is likely to become the most pervasive interface pattern due to the rapidly growing list of wearable devices: Myo armbands, FitBit bracelets, and intelligent clothing. Hands-free wearables are also able to define new interaction approachs beyond tap, swipe, and other common designs.

2.4 Non-Visual Sensors

Non-visual sensors shall be utilized as an input to gather information on environmental factors we can not see, or sense easily. Non visual sensors will likely form contextual information for other wearable devices, but should be considered a separate category due to the likely rise of new wearable forms such as intelligent fabrics. Non-visual sensors will see a rise in usage in extreme conditions: exploration, space, mining, high-rise construction, and medicine.

2.5 Notifications

Notifications delivered to wearable devices is perhaps the most understood wearable category. Just like text messages and push notification to mobile phones, notifications on wearables provide the user with reminders or updates. Wearables, as an extension to your business, should provide actionable notifications beyond simple read only messages. In addition, notifications no longer need to be limited to textual messages.

2.6 Training

Workplaces can utilize wearable devices to improve training, development, and education by incorporating new wearable interfaces into how content is shared and delivered. Just as in-person instruction and knowledge sharing has primarily been replaced by screen sharing and presentation tools, wearable devices will likely disrupt what it means to conduct virtual meetings. In the short term, it is highly probable that screen sharing will be augmented by wearables.

2.7 Proactivity

Wearable devices have the unique ability to proactively influence behaviour based on inputs - both visual and non-visual. We have begun to see the rise of importance in proactive monitoring through health related examples such as FitBit and Apple's HealthKit. Proactivity in the workplace can extend beyond pure health benefits, and be utilized to promote safer workplace habits, cost avoidance strategies, and identification of workplace trends. When combined with consumer behaviour, proactive wearable use cases can create highly differentiated product offerings and improved customer service.

2.8 Industry Categorization:

Construction

Manufacturing

Finance

Healthcare

Office

Retail

Education

Transportation

3. **Wearable** App Ideas

In this section you will find a detailed description of each app and the respective industries in which they can be used. Keep in mind that you can bring these ideas to life by using the Salesforce Wear Developer Pack.

3.1 Security Badges

Category: Interaction, Hands-Free

Industry: Finance, Office

Wearables, and NFC technology can be used to provide watch-based security badges rather than the traditional photo id and badge most workplaces currently employ. Along with the added ease of scanning due to NFC, wearable devices provide the opportunity for more informational messages to be provided to the user. For example, if a user's device, and associated security protocol, are not accepted, an error message and reason can be displayed on the screen providing instructions on how to resolve the issue.

3.2 Meeting Rooms

Category: Augmented Reality, Interaction

Industry: Finance, Office

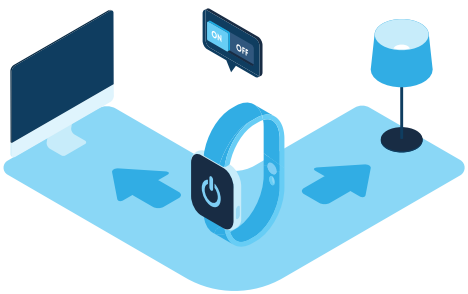
Book a meeting room by quickly scaning the wearable device on an NFC reader near a meeting room, and present the user with a simple interface directly on their wearable device for specifying meeting duration. In addition, wearables could be used to guide a meeting participant to the correct room using augmented reality, or on-wrist turn by turn directions.

3.3 Turn on Facilities

Category: Interaction

Industry: Finance, Office

Many offices already have motion detectors for turning on/off lights as a way to save energy consumption; wearables can improve this process by allowing the wearable to control lights and other facilities - monitors, speaker phones, etc - with consistent controls that follow the user, not the room.



3.4 Time Tracking

Category: Interaction

Industry: Office, Transportation

Many businesses are required to track time, often down to 15 minute intervals.

Rather than requiring the user to open an app on the laptop, and click start, wearables can be used to provide convenient tap to start/stop time tracking apps, and even automatically trigger time tracking based on location based contextual information. eg: when a lawyer enters the courthouse.

3.5 Business Cards

Category: Interaction, Hands-Free, Proactivity

Industry: Office

Rather than sharing paper-based business cards that can be easily lost, and require an additional step of scanning, or manually entering in contact information, workers can share virtual business cards via wearables. Users can then be notified when an acquantaince is approaching by displaying the business card again.

3.6 Show Schematics/Specifications

Category: Augmented Reality, Hands-Free

Industry: Construction, Manufacturing, Transportation

Construction and manufactoring workers often have to consult design blueprints, or mechanical specifications. Typically, the worker must turn their heads to review the material, and are often forced to remove protecting clothing - gloves, glasses etc, or lay down tools, in order to read or interact with it. By leveraging augmented reality wearable devices, workers can have the pertinent information overlayed directly within line of sight, and within context of the task at hand.

3.7 Augmented Collaboration

Category: Augmented Reality

Industry: Construction | Manufacturing | Office

Workers often rely on the advice of co-workers, supervisors, and even public internet resources such as YouTube, to provide additional assistance. Augmented reality in construction environments can be used to collaborate with coworkers just as knowledge workers have traditionally down with screen sharing approaches. This augmented collaboration is especially useful if workers are in locations where in-person collaboration is time-consuming, or risky. For example construction workers repairing a bridge pilon may be suspended below a bridge span but require a supervisor to examine a suspect bolt.

3.8 Hazardous Chemical Detection

Category: Non-Visual Sensors | Notifications

Industry: Construction | Manufacturing | Office

Wearable devices often the ability produce clothing that detects the presense of harzardous chemical. The wearable device can then leverage notifications - haptic, audible, or visual - to alert the wearer that they are entering a dangerous area. In addition, wearables can improves repair tasks may require audible queues (pressure sealed repairs as example). They can be combined with augmented reality or haptic ques to provide a highly effective option.

3.9 Assisted Traction Footwear

Category: Non-Visual Sensors | Notifications

Industry: Construction | Manufacturing

Many workers are required to operate in environments where grip of footwear is critical to health and safely. Wearable footwear may be some day include sensors, similar to those found in traction control in cars, that adjust the level of grip on the soles of shoes in order to provide consisten, or improving, levels of grip based on available tension.

3.10 Real-time Language Translation

Category: Augmented Reality | Training

Industry: Education | Office | Retail

Through the use of audible wearable devices and cloud-based translation services, real-time language translators can greatly improve distribution and delivery of presentations and training material. In addition, this translation can be augmented with visual indicators to provide additional contextual information to the subject, and even options to rewind translation, slow translation speeds, create a textual translation in noisy enviroments, and much more.

3.11 Map Overlays for Low Light Operations

Category: Augmented Reality | Non-Visual Sensors

Industry: Construction | Healthcare | Manufacturing | Transportation

By combining the ability to use augmented reality wearable devices to overlay maps, and non-visual sensors such as radar waves, workers operating in dark, or low light environments can navigate safely. Such conditions can also leverage non-visual queues such as audible warnings to augment the wearers sense of their surroundings.

3.12 Test for Electrical Current

Category: Augmented Reality | Non-Visual Sensors

Industry: Construction | Manufacturing

Similar to hazardous chemical detection, wearable devices such as wearable gloves provide the opportunity to incorpate haptic feedback for electricans to be warned of electrical current prior to physical contact.

The wearable globe could vibrate warning of danger.

3.13 Measure Angles for Construction

Category: Hands-Free | Non-Visual Sensors

Industry: Construction | Manufacturing

The idea of wearable devices in other form factors such as gloves for construction workers makes it possible to add gyroscoptic sensors to enable hands free measuring of angles and distances. Workers will no longer need meauring tapes, and shall begin to rely on the wearable device to become an extension to the task.

3.14 Radio Waves to Meaure Density

Category: Augmented Reality | Non-Visual Sensors

Industry: Construction | Manufacturing

Many workers are required to test the density of material: concrete in foundations, how much load a particular surface may support etc. By combining the use of radio waves and wearable devices, workers could quickly perform these tests with visual indicators displayed via augmented reality. This information, once connected to the cloud, could be used to calculate pour speed, or depth of drilling required in order to meet safety standards.

3.15 Patient Clean Rooms

Category: Hands-Free | Non-Visual Sensors

Industry: Healthcare

Doctors and surgeons can benefit from patient clean room applications powered by wearable devices such as the Myo arm band for interacting with existing systems such as patient records and x-rays.

Once connected to an app, the surgeon can perform natural gestures to zoom, rotate, and perform actions without the risk of desterilization of hands.

3.16 Intelligent Pairing of Commercial Vehicles & Driver

Category: Hands-Free | Notifications | Proactivity

Industry: Transportation

Regulations require commerical vehicles to display their height in order for drivers to be aware of maximum clearance. Wearable devices can be used to automatically pair the driver with the vehicle. This paired information can include details such as clearance height, weight restrictions, and cargo manifests. Apps can then be written to proactively warn the driver of approaching low clearances and suggest alternate routes using cloud-based mapping providers and much more.

3.17 How's My Driving?

Category: Hands-Free | Notifications

Industry: Transportation

Wearable devices, many of which are already equipped with accelerometers, can be used to provide haptic warnings when commerical drivers exceed speed limits, or have driven for extended periods without required rest stops. Further, this information can be stored for insurance reporting in case of accidents, or driver training.

3.18 First-person Instruction

Category: Augmented Reality | Training

Industry: Education

Traditional training for medicial residents, and other professions, include a specialist performing their tasks (a surgeon operating on a patient, for example) with students observing, often from a distance and poor vantage points. Using wearable devices such as glasses, students can learn by seeing exactly what the specialist sees. In addition, this information can augmented with contextual information including pulse, heart rate, and provide the student with the ability to screen shot particular moments of importance to them.

3.19 Optimized Event & Traffic Flow

Category: Proactivity | Notifications | Training

Industry: Education

Wearable devices may be paired with beacons positioned throughout event space floors. These beacons can track attendees movements and involment with booths and staffers. Notifications can then be proactively delivered to the attendee to highlight areas of interest, based on previous interactions, sessions of interest nearby, and serendipitous introductions to attendees with similar interests.

3.20 Continuous Build Notifications

Category: Notifications

Industry: Education

Developers need to be informed whenever continuous integration builds fail. Notifications can be sent directly to teams on build status, and highlight errors. Notifications should also include actions that allow QA to rollback to previous builds on error, or automatically promote successful builds to the next stage in their lifecycle.

3.21 Presentation Using Gestures

Category: Augmented Reality | Training

Industry: Education

Presenters at events and meetings typically use 'clickers' to advance slides, and laser pointers to highlight important information. Gesture-based wearable devices could be used to allow the presenter to more emotionally advance slides via sweeping gestures, or use pinch and zoom techniques to make slides more interactive.

3.22 Immersive Presentations

Category: Augmented Reality | Training

Industry: Education

Just as gestures can make slides more interactive, as wearable devices become cheaper and more prevalent, speakers can begin to develop presentations that stretch beyond the stage. Attendees with glass-based wearables may be provided with augmented information, and attendees with watch-based wearables may be able to instantly share slides or quotes via social media.

3.23 Notes & Audience Questions

Category: Augmented Reality | Training

Industry: Education

Speakers can benefit from augmented reality and glass-based wearables too. They can be presented with an augmented view containing speaker notes, questions posed by the audience in real-time, and if paired with beacon technology, potentially even augment information about attendees within their line of sight.

By understanding exactly who is in the audience, the speaker can tailor their talk track to include more relevant and personal examples and information.

3.24 Decibel Reader

Category: Non-Visual Sensors | Notifications

Industry: Construction | Manufacturing

Wearables which detect unsafe levels of noises can warn the worker via haptic, or visual feedback that they are approaching dangerous areas, or automatically perform regulatory checks as part of city or council inspections.

3.25 Track Movement

Category: Non-Visual Sensors | Notifications

Industry: Healthcare | Transportation

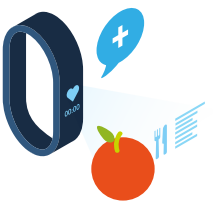
Many organizations including legal and health operations need to track movement of individuals and animals. This is especially important for health organizations that need totrack patients to identity contact paths and prevent the spread of communicable diseases. Wearable devices such as watches can automatically update organizations and proactively warn of potential breakouts.

3.26 Healthy Life Incentives

Category: Non-Visual Sensors | Proactivity | Training

Industry: Healthcare

The ability to promote health and fitness via wearables enables Insurance companies to proactively offer discounts on premiums based on activity. Developers can create apps that track customers progress towards goals and automatically update internal systems. Further, if a customer allows the sharing of blood sugar levels, heartrate, and other more personal health indicators, insurance companies can provide proactive suggestions on how to lower colesterol, adjust dietary intake and live a healthy life. The result is improved customer health, proactive reduction in premiums, and a reduction in claims the company may be required to pay.



3.27 Production Monitoring

Category: Notifications

Industry: Office

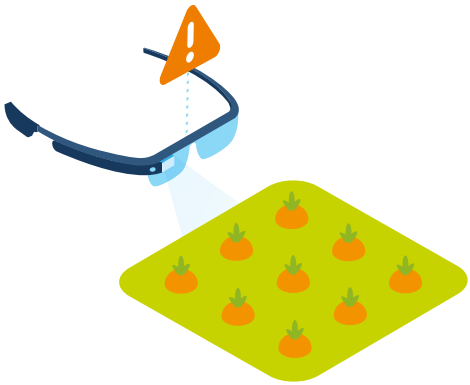
Engineers responsible for ensuring uptime and performance of applications can leverage apps developed for wearable devices, such as smart watches, to deliver actionable notifications. Apps should include the ability to instantly scale services, start emergency failover processes, and authorize users without the need to open a laptop.

3.28 Crop Disease Prevention

Category: Augmented Reality, Proactivity, Training

Industry: Education, Healthcare

Emerging nations can leverage wearable devices to provide crop disease prevention strategies in remote areas. Devices such as glasses can be used for rural farmers who may have poor literacy skills and unable to read about crop blight warning signs. Via the use of augmented reality, farmers can walk through their fields with the wearable device scanning line-of-sight for warning signs. The wearable device can then display pictures of prevention strategies.



3.29 Remote Diagnosis & Treatment

Category: Augmented Reality, Proactivity, Training

Industry: Healthcare

Similar to crop disease prevention, doctors can use wearable devices for the remote diagnosis of diseases, and treating injuries. Wearable devices can include a visual diagnosis as well as diagnosis based on heart rates, blood pressure, balance and range-of-motion related issues via accelerometers, as well as grip strength and dexterity. Doctors can provide treatment instructions using audible, or visual ques.

3.30 Employee Benefits

Category: Notifications, Proactivity

Industry: Office

Many businesses offer a variety of employee benefits, from discounts on movie tickets, to annual eye glasses and vision rebates. Unfortunately most of these benefits go unused: employees are either not aware of the discount, or did not have access to the information at the time they could redeem it. By creating a wearable app that proactively notifies the wearer of a benefit when they are in close proximity to it, and presenting the appropriate discount code, employees can more easily take advantage of perks.

3.31 Interactive Store Displays

Category: Augmented Reality | Interaction

Industry: Retail

Wearables, either owned by the user, or loaned for an immersive experience whilst in store unlock the possibility to move beyond static store displays. Sensors may be embedded into mannequins, with customer vitals (height,weight, color or fashion style preferences) read from smart watches, to produce augmented outfits displayed to wears of smart glasses. Pricing, may also be pushed to customers watches and dynamically updated to reflect sales, member discounts and more.

3.32 Healthy Grocery Shopping

Category: Augmented Reality | Interaction

Industry: Retail

Wearable devices such as smart watches may be paired with apps for healthy eating. These apps may provide recommended foods, caloric intake, sugar levels, carbohydrate and fat contents. Grocery stores could then be fitted with sensors to notify the customer of food choices that fit the wearers diet specifications. Health Insurance companies could offer premium discounts for customers who adhere to provided dietary plans.

4. Summary

The explosive growth of wearables unlocks a myriad of opportunties for improving productivity at work - whether that workplace is at a desk, on an oil rig in the middle of the ocean, in a lab working with harzardous chemicals, on a construction site, or even in rural community in the heart of Africa. Wearable devices are introducing new modes of interactivity utlizing visual, audible, and haptic ques to provide the opportunity for app developers to create entirely new experiences.

The 32 killer wearable app ideas for work presented within this ebook are intended to spark ideas where you may be able to create apps for your workplace. They are a starting point for inspiration. And every great journey has a starting point. This is yours.

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