**Conceptual/Method of gathering data**

Input methods could be varied. This is a wearable product, so must be considered in its own context. Yes, standard Q&A input can be done, but shouldn’t be limited to just that. Consider where a wearable \*doesn’t\* just replace a handset. It provides data that a handset can or can’t easily provide. Using Gear S as an example, it can provide motion data, impact (steps), heart rate, UV, sleep.

Motion data: Gather accelerometer data (currently limited to 25Hz sample rate) to measure motion.

Step Counter: Can be used to gather employee activity and used as seen fit.

UV sensor: Gather UV exposure- perhaps as safety for outdoor workers.

Heart rate: Useful for employee health, sports team, etc…

Positional: Gear S has its own GPS, or can use a tethered phone.

Inputs can be graphical and easy to see since the display is small. Some examples of data gathering elements:



Iconography Color Blocks



Color Blocks Spinner

For Q&A, it should be kept simple in terms of questions and choices should be limited as well, to be as innocuous as possible and less error prone. Use color, iconography and large font (for less agile fingers). Questions can fork based on answers. For instance, Question #2 can be different depending on the answer to Question #1. This should be kept simple, however- basic data gathering.

The above data can then be combined with other sources, especially when position and time is included. Time can be automatically calculated from start of first task to end of final for some use cases. Speed in answering questions can even be useful data when quick judgment of an employee is a critical skill. Use cases that utilize environmental, physical and timespace data differentiate wearables from mobile devices and fixed terminals.

By gathering a larger number of parameters, it becomes possible to slice and dice the data in various ways. You can have a data-driven workforce, always working to optimize performance and productivity, while reducing errors and accidents.

**Customer Engagement**

Measure various aspects of customer engagement. Measure the customer interaction and/or demographic.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Sales performance:** Measure the time a salesperson engages with a customer. |
| Time Engaged | Start/Stop timer measurement |
| Did you make a sale? | Yes | No |
| Did you upsell? | Yes | No |

This is a simple case, and can be fused at the end of a period with other salesperson data, and additional information such as actual sales, raw traffic information, etc… to help measure effectiveness and efficiency of salesperson. |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **On-site customer satisfaction:** Take a quick measurement of customer satisfaction at completion of a job. |
| Time Engaged | Start/Stop timer measurement |
| Was customer 100% satisfied? | Yes | No |
| Yes: Would customer use us again? | Yes | No |
| Yes: Would customer be a referral? | Yes | No |
| No: Would customer like to be contacted for more information? | Yes | No |

This is a different use case in that Q/A adapts to response. Different questions are posed depending on response. |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Real Estate:** Record client’s response to showing of a house. |
| Time spent on property | Start/Stop timer measurement |
| Property | [Automated] Geo-stamp |
| Client interest in house | 1-5 rating |

Gather data on time spent at various properties. Geostamp is gathered automatically from positional data and time from Start of timer. Location information can be fused later with MLS data to further help refine other properties for the client. |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Rapid Customer Profiling:** Rapidly enter basic customer information |
| Customer Count | New Customer button |
| Gender | Male | Female |
| Age Group | Child | Young Adult | Middle Age | Senior |
| Family | Family | No Family |

A lookout in a business can provide rapid recording of basic customer profiles for better understanding of customer profiles. |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| Personal Trainer Reporting: Gather data on a client’s progress |
| Client’s Weight | Numeric Keypad entry |
| Resting Heart Rate | Numeric or spinner |
| Warm-up | Start Time + Minutes |
| Exercise #1 | Total Reps |
| Exercise #2 | Distance run |
| Exercise #3 |  |

Gyms can enhance their personal trainer programs by preloading workout to a wearable for each member. As workout progresses, data is recorded for each workout. Time is automatically logged from start of warm-up to final exercise data entry. Afterwards, member is able to log onto club’s portal and see their fitness progress as they progress through the personal training regimen. The wearable in this case is worn by the trainer in order to record progress. |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| VIP Customer Identification: Customer screening to identify high priority customers (Bank) |
| Customer Count | Next Customer Button |
| Visit Reason | Deposit | Withdrawal | Loan | New Account |
| Loan: Type? | Mortgage | Business | Other |
| New Account? | Personal | Business |

Depending on the latency of data gathering, this could help alert the right bank personnel to quickly service new customers for the most important business. |

**Employee Measurement**

Employee measurement is a broad area. Performance can be measured; health can be measured- either for personal health improvement or risk-based health monitoring to reduce medical expenses and liability. For personal health, employees can be rewarded for staying healthier.

Privacy can be a concern here, so data can be aggregated if needed.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Task Measuring:** Measure task parameters |
| Task Time | Timer Start/Stop |
| Motion information | [Automatic] |
| Location | [Automatic] |

This is vague, but the general idea is that employee performance can be gathered through simple Q&A and timing. Motion can be incorporated for certain job types where motion is required- i.e., employee is not sitting down on the job. Location can further ensure employee is in the right place to do the task. Can be used in aggregate to measure productivity improvements. |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Spot Inspections:**  Record basic data during a spot inspection |
| Employee # | Numeric |
| Question #1 | [selections] |
| Question #2 | [selections] |

Spot inspections can be made for safety and/or productivity reasons. Question list can change depending on employee # (and the tasks assigned them). Useful individually or in aggregate. |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Quality Measurement:** Record basic QA check information |
| Product ID or Line # | Alphanumeric or list |
| Pass/Fail | Pass | Fail |
| Fail: | Incomplete | Incorrect | Flawed | Other |

Spot check aggregate data collection. Time stamps can be correlated with shift and assigned employees to locate quality issues and identify additional training needs. |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Route Optimization:** Gather data along route to better optimize future errands/deliveries. |
| Timer | Start |
| Delivery | Increment |
| Geolocation | [Automatic] |
| Time | [Automatic] |
| Timer | Stop |

A courier in a city, for instance, could be monitored for delivery efficiency. This is not for larger delivery services that have in-vehicle dispatch systems, but for smaller ones that aren’t so sophisticated. |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Employee Health Incentives:**  Measure employee health data |
| Steps | [Automatically] |
| Motion | [Automatically] |
| UV | [Automatically] |

Information can be aggregated or served up individually. Engage with the employee in actively managing their own health through incentives. Let the employees monitor their own activities. |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Training Programs:**  Monitor training in some job occupations |
| Practice Timer | Start/Stop |
| Question 1 | [selections] |
| Question 2 | [selections] |

Wearables could be used for some types of training to allow employees to improve speed and performance. Jobs that have a critical time element can be practiced and graded until an employee’s scores are good enough to “graduate”. Any parameters necessary as well as challenges in the form of questions can be managed. Time to answer questions is another piece of data that can be measured when judgment is being tested. |

**Various Verticals**

There are myriad applications in various verticals. Here are a few different ideas on how SurveyMonkey on a wearable might be used.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Medical Rapid Screen:** Fast data gathering for public health screening/large patient group |
| Patient Counter | Next Patient |
| Have you had any of these symptoms in the past 3 days? | Fever | Vomiting | Diarrhea  |
| Follow up questions… |  |

Canvas a larger group of patients where aggregate data is more useful. |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Patient Vitals:** Quick record of patient vital signs |
| Patient Start | Timer Start |
| Weight | Numeric entry |
| Temperature | Spinner |
| Blood Pressure | Spinners |
| Patient Stop | Timer Stop |

Depending on clinic type, this might be an option for screening patients, especially in an open area. |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Pharmaceutical Trial/Medicine Regimen:** Gather data and ask questions on a timed basis to better gauge efficacy of medication |
| Motion gathering | [Automatic] |
| Question #1 | [selections] |
| Question #2 | [selections] |

This could be varied. For a trial for something like Parkinsons, motion could be measured at intervals to determine automatically the effect of reduction on tremors. Questionnaires can be triggered at set intervals for more immediate patient feedback.In a variation on this scenario, a primary care physician could issue a wearable to have ongoing data gathered via activity monitoring and/or short questionnaires. |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Social Service/Home Health Care:** Quick Q&A and condition reporting |
| Engagement Start | Start Timer |
| Geolocation | [Automatic] |
| Time | [Automatic] |
| Question #1 | [selections] |
| Question #2 | [selections] |
| Engagement Stop | Stop Timer |

For social service visits, basic visit data can be gathered on the stop, including place/time stamp to keep a record of the actual visit for legal reasons. A variation of this could be used for Home Health Care.In both cases, for legal reasons, encryption and data chain of custody needs to be maintained. |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| **Security Perimeter:**  Periodic walks of property by security guard |
| Next Stop | Increment |
| Time | [Automatic] |
| Location | [Automatic]- if using beacon technology |
| Is location secure? | Yes | No |
| No: Follow-up question | [selections] |

Commercial real estate/building management use case. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| Neilson Questionnaire: Gather quick, context sensitive data for a ratings agency. |
| Question #1 | [selections] |
| Question #2 | [selections] |

Agencies that measure the public pulse around various consumption habits could benefit from contextual questioning based on location, for instance, or some other measuring device detecting a situation that follow-up questioning would add value to. For instance, Neilson families have equipment installed in their houses to measure their TV habits. Questions could be triggered based on information from that equipment and delivered to a wearable. |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| Food Service:  |
|  |  |
|  |  |
|  |  |

 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| Education:  |
|  |  |
|  |  |
|  |  |

 |

**In Situ measurement**

In Situ measurement has possibilities, especially in sports.

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |
| --- |
| **Sports Team Measurement:** Measure team kinetic stats |
| Motion & impact measurement | [Automatic] |

Player stats in the context of the team can be gathered, and team aggregate data use. Player data can also be fused with additional data such as scoring to provide overall in-play player performance measuring. |