The EcoSort Task Analysis Table

| Task Step | Identify Operator or Machine | What information/data is required? | What analysis is conducted? | What decisions are being made? | What control actions are required? | Criterion for completion? |
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| **Finish using product** | Operator | | | | The product must be done being used. | Product must be done being used (does not necessarily mean product was fully utilized). |
| **Decide to dispose of product** | Operator | | | Deciding that the product is not longer being used, so it will be disposed. | | User must have made decision. |
| **User takes image of product using EcoSort app** | Operator using Machine | | | | Taking a photo. | Photo has been taken. |
| **Machine identifies product** | Machine | | Product in photo is identified using software. | | | Product has been identified. |
| **Data about recycling** | Machine | Knowledge about area's and company's recycling laws, rules, and regulations | | | | Machine has successfully received and processed data. |
| **Decide if recyclable** | Machine | | Deciding if the product that has been identified is meeting the recycling requirements found in previous step. | | | Machine has output a decision on recyclability. |
| **If Yes Skip next step** | | | | | | |
| **If No, throw in trash and skip recycling steps** | Operator | | | | Placing object into trash disposal bin. | Item in trash. |

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| **Have data about what needs to be rinsed before being recycled** | Machine | Knowledge about company's rinsing policies. (Also if something will be damaged by rinsing, like paper). | | | | Machine has confirmed (not necessarily with user, but with its own checking process) that it has the information needed. |
| **Decide if product needs to be rinsed** | Machine | | Decide if identified product meets rinsing requirements found in previous step. | | | Machine has made a decision and has output that decision. |
| **If Yes, rinse product** | Operator instructed by Machine | | | | Going to sink or other water source and sufficiently scrubbing and/or removing materials from product. | Product has no further materials on it. |
| **If No, proceed to next step** | | | | | | |
| **Take product to disposal area for recyclables in the home** | Operator instructed by Machine | | | | Transportation from one part of the home to another. | Operator is now near the disposal area (close enough to touch). |
| **Acquire knowledge of what is proper recyclable form** | Machine | Knowledge of how company wants different materials recycled. | | | | Machine has confirmed (not necessarily with user, but with its own checking process) that it has the information needed. |
| **Decide what is proper recycling form of product** | Machine | | Deciding based on data from previous step and knowledge of product what | | | Machine has communicated (either to itself or user) the proper recycling form. |

| Step | Actor | | | | | |
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| | | | the proper form is. | | | |
| **Determine if product will fit into recycling receptacle** | Machine | | Based on the knowledge the machine has of the product and of its own dimensions, the machine will decide if object will fit. | | | Machine has informed user if product will fit in receptacle or not. |
| **If Yes, put inside recycling receptacle** | Operator instructed by Machine | | | | Transportation of product from operator to machine. | Item is inside machine. |
| **If No, put into designated other location after doing next step (for example, put a large box behind the recycling bin)** | Operator instructed by Machine | | | | Transportation of product to storage location. | Item is in designated location. |
| **Put product into proper recycling form** | If product is too large for bin, Operator instructed by Machine. If product fits in bin, Machine. | | | | Physical manipulation of product based on analysis from previous step. | Product is in proper recycling form within the bin. |
| **If bin (or trash) is full or operator wants to empty bin, proceed to next step. Otherwise, return to first step.** | Currently operator, but in future will involve machine. | | Operator observes the bin and decides if it is full enough to warrant bringing out. | | | Operator has expressed desire to empty bin (either due to bin being full or due to other reason). |
| **Take trash and/or recycling out of home into whatever is the outdoor disposal storage** | Operator | | | | Transport bin contents to outdoors. | Bin has been emptied successfully. |

| Task | Actor | | | | | |
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| **Replace trash/recycling bags in home. Return indoor recycling bin to appropriate location** | Operator | | | | Requires getting clean bag for trash and putting it in trash bin and returning recycling bin into EcoSort machine. | Trash bin has clean trash bag and recycling bin is in EcoSort machine. |
| **Know if user is responsible for bringing trash bins and recycling bins to the curb (If yes, continue. Otherwise proceed to replacing bags)** | Machine | User needs to know if they are responsible for trash and provide that information to the machine when they first set up EcoSort. | | | | Machine has confirmed (not necessarily with user, but with its own checking process) that it has the information needed. |
| **Figure out when and where to bring bins out** | Machine | Data taken from online resources like company website. | | | | Machine has confirmed (not necessarily with user, but with its own checking process) that it has the information needed. |
| **Figure out when/where you are related to that day/location** | Machine | | Machine takes information from previous step and compares it to what date it knows it is and whether the bins are in/out.  It informs operator accordingly. | | | Machine has conveyed to operator that the bins need to be taken to the curb (information will be conveyed day before trash/recycling collection). |
| **Bring bins to appropriate location 1 day before the bins are supposed to be collected** | Operator instructed by Machine | | | | Physical transportation of outdoor bins to curb. | Bins are at curb. |

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| **Know if user is responsible for bringing trash bins and recycling bins to the curb**<br>**If Yes, continue**<br>**If No, task is done** | Machine | Data that is from user. | | | | Machine has confirmed (not necessarily with user, but with its own checking process) that it has the information needed. |
| **Figure out when and where to bring bins in** | Machine | Data taken from online resources like company website. | | | | Machine has confirmed (not necessarily with user, but with its own checking process) that it has the information needed. |
| **Figure out when/where you are related to that day/location** | Machine | | Machine takes information from previous step and compares it to what date it knows it is and whether the bins are in/out. It informs operator accordingly. | | | Machine has conveyed to operator that the bins need to be taken in from the curb (information will be conveyed after trash/recycling collection). |
| **Bring bins to appropriate location after the bins have been emptied** | Operator instructed by Machine | | | | Physical transportation of outdoor bins from curb. | Outdoor bins are now returned to regular storage location and the machine has received confirmation from human that bins have been brought in. |