

<b>Task Step</b>	<b>Sub-task</b>	<b>Task Classification</b>	<b>Operator (human) or Machine</b>	<b>Automation Strategy</b>
<b>Healthy Start Installation</b>	Operator is alerted by phone that it is time for breakfast	Acquire Information	Both	There is a specific time set on the operator's phone for breakfast and an alarm goes off
	Operator decides he/she is in the mood for pancakes and proceeds to set up the Healthy Start Pancake Making machine	Analyze information + decide action	Operator	None
	Open Kitchen Drawers	Implement Action	Operator	Healthy Start could give off some sort of signal alerting the user of its location.
	Retrieve Healthy Start from drawer	Implement Action	Operator	Healthy Start could get itself out of the drawer
	Place Healthy Start on countertop	Implement Action	Operator	None
	Plug Healthy Start cable into kitchen outlet	Implement Action	Operator	None
	Turn Healthy Start power on	Implement Action	Operator	None
	Healthy Start scans the environment for recognizable Wi-Fi signal	Acquire Information	Machine	Upon being turned on, Healthy Start scans for Wi-Fi
	Healthy Start can tell Wi-Fi signal is strong and there is enough bandwidth to connect	Analyze Information and Decide Action	Machine	Healthy Start has a baseline Wi-Fi level strength that it compares the actual ones to
	Healthy Start connects to Wifi	Implement Action	Machine	Healthy Start automatically connects to Wi-Fi after detecting signal

	Healthy Start scans environment for operator's phone	Acquire Information	Machine	Upon connecting to Wi-Fi, Healthy Start scans environment for registered operator's phone
	Operator's phone is within reach	Analyze Information	Machine	Healthy Start has sensors that pick up signals given off by operator's phone
	Healthy Start decides to connect to operator's phone	Decide Action	Machine	None
	Healthy Start connects to operator's phone (with operator's permission)	Implement Action	Both	Healthy Start requests to connect to operator's phone and connects if operator permits

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<b>Healthy Start Set-Up</b>	Healthy Start scans and senses its internal compartments for pancake mix and water	Acquire Information	Machine	Healthy Start has built-in accelerometers and pressure sensors that allows it to know the exact volume and weight of the ingredients currently in its compartments
	Healthy Start senses a particular amount of pancake mix and water in its internal compartments	Analyzing Information	Machine	Healthy Start has a built-in algorithm in its software that knows the amount of ingredients necessary to make pancakes for its specific user (and those eating with the user)
	Healthy Start decides to alert the operator that it is low in water and pancake mix	Decide Action	Machine	Healthy Start has an alarm feature that alerts the operator when it needs to be loaded up with ingredients
	Healthy Start plays alarm to notify operator it is low in ingredients	Implement Action	Machine	None

<b>Healthy Start Set-Up (cont.)</b>	Operator gets water and pancake mix and fills internal compartments to lines designating a particular volume	Implement Action	Operator	Perhaps Healthy Start could have access to the pantry and water pipes so that the operator wouldn't need to perform this step?
	Healthy Start scans and senses its internal compartments for pancake mix and water	Acquire Information	Machine	Healthy Start has built-in accelerometers and pressure sensors that allows it to know the exact volume and weight of the ingredients currently in its compartments
	Healthy Start senses a particular amount of pancake mix and water in its internal compartments	Analyzing Information	Machine	Healthy Start has a built-in algorithm in its software that knows the amount of ingredients necessary to make pancakes for its specific user (and those eating with the user)
	Healthy Start decides that the amount of water and pancake mix in its internal compartments is sufficient and alerts operator to proceed	Decide Action + Implement Action	Machine	Healthy Start has a built-in algorithm in its software that knows the amount of ingredients necessary to make pancakes for its specific user (and those eating with the user)
	Operator has a work meeting earlier than breakfast	Acquire Information	Operator	Healthy Start could link with the operator's phone calendar and food tracking app from the previous day to know how many pancakes to make and when to have them ready
	Operator realizes he is low on time that particular breakfast	Analyzing information	Operator	Healthy Start could link with the operator's phone calendar and food tracking app from the previous day to know how many pancakes to make and when to have them ready
	Operator decides to order pancakes via voice command rather than on his phone	Decide Action	Operator	Healthy Start could link with the operator's phone calendar and food tracking app from the previous day to know how many pancakes to make and when to have them ready

	Operator uses voice command to ask for a specific number of pancakes to be ready at a particular time	Implement Action	Operator	Healthy Start could link with the operator's phone calendar and food tracking app from the previous day to know how many pancakes to make and when to have them ready
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<b>Pancake Preparation and Serving</b>	Healthy Start receives the # of pancakes and serving time specified by the operator	Acquire Information	Machine	Healthy Start has an algorithm in its software that allows it to calculate the exact amount of ingredients required per pancake and the cooking settings for the griddle
	Healthy Start calculates the amount of ingredients necessary to make desired # of pancakes	Analyze Information	Machine	Healthy Start has an algorithm in its software that allows it to calculate the exact amount of ingredients required per pancake and the cooking settings for the griddle
	Healthy Start decides the correct amount of each ingredient	Decide Action	Machine	Healthy Start has an algorithm in its software that allows it to calculate the exact amount of ingredients required per pancake and the cooking settings for the griddle
	Healthy Start decides correct preheat setting given the serving time the operator specified	Decide Action	Machine	Healthy Start has an algorithm in its software that allows it to calculate the exact amount of ingredients required per pancake and the cooking settings for the griddle
	Pancake Mix and Water slide down individual chutes into a mixing container	Implement Action	Machine	None

<b>Pancake Preparation and Serving (cont.)</b>	Healthy Start mixes pancake mix and water in built-in mixer	Implement Action	Machine	None
	Healthy Start's built-in non-stick griddle begins to preheat	Implement Action	Machine	The Healthy Start griddle is connected to software that knows the exact cooking times and temperatures
	Pancake mixture slides down another non-stick chute into pancake-shaped mold placed on the pre-heated griddle	Implement Action	Machine	None
	While one side of the pancake is cooking, volatile odorants are released by the cooked side and sensed by sensors in Healthy Start	Acquire Information	Machine	Healthy Start has odorant sensors
	Healthy Start analyzes the composition of the odorants to determine whether or not that side is cooked	Analyze Information	Machine	Healthy Start has software that determines odorant composition
	Healthy Start decides that particular side of the pancake is cooked and it is time to flip it	Decide Action	Machine	None
	Healthy Start uses built-in spatula to flip the pancake on other side	Implement Action	Machine	None

	Cooked Pancakes are placed onto compostable plate with spatula	Implement Action	Machine	None
	Plate with pancakes roll down conveyor belt to operator	Implement Action	Machine	None

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<b>Healthy Start Cleaning and Hibernation</b>	Healthy Start asks operator if he is satisfied with the amount of pancakes	Implement Action	Machine	Healthy Start has built-in voice functionality
	Operator gives "yes" answer	Implement Action	Operator	No answer by operator could lead to same result
	Healthy Start receives "yes" answer	Acquire Information	Both	None
	Healthy Start decides to proceed to self-cleaning and hibernation	Decide and Implement Action	Machine	None
	Healthy Start uses built-in soapy water jets and scrubbers to clean all compartments except for ingredient compartments	Implement Action	Machine	None
	Healthy Start detects filth and contamination in internal compartments and griddle	Acquire Information	Machine	Healthy Start has infrared cameras and microbial assays to detect filth and contamination

	Healthy Start compares actual level of filth and contamination to baseline levels	Analyze Information	Machine	Healthy Start uses algorithms built into its software to compare levels of filth and contamination to an accepted level
	Healthy Start decides that internal compartments are clean enough	Decide Action	Machine	Healthy Start uses algorithms built into its software to compare levels of filth and contamination to an accepted level
	Healthy Start begins hibernation until it is unplugged and put away for the next day	Implement Action	Machine	None
	Operator turns off Healthy Start	Implement Action	Operator	This could happen automatically after a period of time without use
	Operator unplugs Healthy Start	Implement Action	Operator	None
	Operator puts away Healthy Start in drawer	Implement Action	Operator	None