

Target

>99.9%

>98%

ess than or equal

digits in phone #

50% of charges from landline

00% access

90% < 2 minutes

>90%

Functional Requirements

(VOIP Service)

% up time

Dollars

Minutes

Measurement Units

Standardized clarity test

of clicks or buttons to press for call initiation

% of call time with unacceptable noise level

Access from predefined services

Customer satisfaction rating





Water			, 4PP-1	 Information
Electricity	 E Update Status	D Rinse Hair	Shampoo Shampoo & Hair	Shampoo
			 Washed Hair Water Shampoo Heat 	

Inforr Heat

Morpho

	Information - Upo	iate Status	Wash Water Water Water Water Water	ied Hair	nformation	
	Mo	rphologi	cal Matri	x		(/ Expectation
	Function Solution					Ease of Use Clean (no w
A	Sub-function A	Solution 1	Solution 2			Comfortable
В	Sub-function B	Solution 1	Solution 2	Solution 3	Solution n	Speed
С	Sub-function C	Solution 1	Solution 2	Solution 3		Reliable
D	Sub-function D	Solution 1	Solution 2	Solution 3	Solution n	Optional Fe Cost
n	Sub-function n	Solution 1	Solution 2	Solution 3	Solution n	Noise
		Lever Commu	raging nication			Easy to Mai Total +\$ (b Total -\$ (b Total -\$ (s Total 5\$ (s Comparison
						Concept Sur
		Commu	inicating			0 - Human V
			rgency			1 - Reclining 2 - Massage
		-				3 - Massage
						4 - Straight C
	In	stitutionalizing Change				5 - Straight C

Finish Date:

Final Ass'ly C6 Sedan 3/1/2008

				F	Product Zst	>6
Pugh Mat	ſΙΧ					
(Automatic Hair Washing So	lutions	s/Desig	gns)			
ons	1	2	2	4	-	
115	1	2	2	4	5	
se	-	-	-	-	-	
water or shampoo spill) le	S	+ +	+ +	+	+	
le	5	+	+	S	S	
	+	+	+	+	+	
	+	+	+	+		
Features	S	+	+	+	+	
	+	+	+	+	+	
aintain	S	S	S	+	S -	
better than datum)	4	6	6	6	4	
worse than datum)	1	2	2	1	3	
same as datum)	5	2	2	3	3	
n	3	4	4	5	1	
	*Not					
		uals b Jals w				
ummary			ame/n	o cha	ange	
Washing Method						
ng Chair with Spray Nozzle &	Bristl	es				
e Table with Spray Nozzle &	Mass	age Je	ets			
e Table with Spray Nozzle &	Fitted	d Mas	sage ⊦	lood		
Chair with Fitted Massage I			-			
Chair with Fitted Massage I				sage		
and many many massing of the				90		

Tuncuuri		LITEUS OF Failure	36		ouc	Design Controls	DEI	N.	Account(3)	
Name of Item being analyzed and its functions required to meet design intent.	In what ways might the component/ subsystem/ system potentially fail to meet the design intent?	What is the effect of each failure mode on the function as perceived by the customer? (Internal or External)	How severe is the effect to the customer?	How can the failure occur? Describe in terms of what can be corrected or controlled. Try to identify the causes that directly impact the failure mode.	How often does the cause or failure mode occur?	What are the existing prevention, design verification or other activities that will (1) prevent the cause of the failure mode or reduce its rate of occurrence, (2) detect the cause and lead to corrective actions, or (3) detect the failure mode once failure has occurred.	How well can you prevent/detect cause or failure mode?	SEV X OCC X DEI	What are the actions for reducing the occurrence, or improving detection, or for identifying the root cause if it is unknown? Should have actions only on high RPNs or easy fixes.	Who is responsible for the recommender action?
Blades - To cut hair	Too duli	Hair not cut close enough, discomfort	7	Not sharpened properly in manufacturing	3	Statistical tolerancing of edge angle, capability verified	3	63	None	N/A
			7	Worn out prematurely	3	Specification of optimum steel grade (440C) for blade and supplier quality management plan	3	63	None	ŊA
			7	Corroded	3	Specification of optimum steel grade (440C) for blade and supplier quality management plan	3	63	None	N/A
	Wrong angle	Hair not cut close enough, discomfort, injury	7	Pore size too large Deformed blade spacers	7	Statistical tolerancing of spacer dimensions, but difficult to hold tolerance with current material	7	245	Investigation of alternative spacer materials	Joe Martin, Materials department, Dec 1, 2007
Porous gel pad - applies gel and controls gel flow	Low or no flow of gel	Inadequate lubrication, discomfort, injury	10	Clogged	5	Gel formulation to ensure adequate solubility	5	150	Ensure gel specifications are adequate and achievable	Mary Jones, project leader, and Scott Perkins, Crear & Gel Product Manuf. Mgr, Oct 15, 2007
			10	Pore size too small	7	Spec limits for pore size from pad supplier, but impact of variation not well understood currently	7	490	DOE or other study to determine effect of pore size and other potentially interacting variables	Fred Fritz, Design Engineering, Nov 30, 2007
	Excessive gel flow	Gel runs out too soon	5	Pore size too small	7	Spec limits for pore size from pad supplier, but impact of variation not well understood currently	7	245	DOE or other study to determine effect of pore size and other potentially interacting variables	Fred Fritz, Design Engineering, Nov 30, 2007



OE # Outcome Expectation

Increase the likelihood that service is always available to make phone calls Minimize the effort t takes to place or receive phone calls

axes to place or receive phone calls Increase the likelihood that calls are designed and estabolish the receiver understood by the receiver receiver the likelihood the designed that the standard Nimimize the background noise generated by the call Minimize the background noise generated by the call Minimize the background noise as a discussion of the standard by the call Minimize the discussion system-related problems with access to only a computer, PDA, etc. Minimize the time it takes to resolve technical issues with the system failures

Charter Date:20-Apr-16 Pilot Leader: J. Moynette Executive Sponsor: A. Fields Team Name: VCP Pilot Name: Virtual Chef (V-Chef) Course Pilot Start Date: 01-Jun-16

Pilot Charter

VOIP system availability

VOIP call initiation effort

Background noise level

Cost per month for VOIP

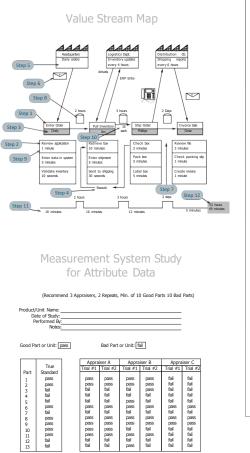
Access of VOIP service

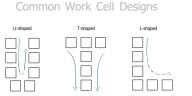
VOIP customer service

VOIP service hold time

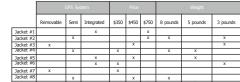
Call clarity







Conjoint Analysis



		_					
				Outq	outs		
		Nepu Support	Quok Delivery	User Friendly Webste	D/D Selection	Mindabliky	Total
	Customer Priority	3	9	7	9	5	
Process Step	Process Input						
1 Select DVD	Web Interface	9	0	9	3	0	117
2	Inventory System	1	5	5	3	0	110
3 Check Available Inventory	Distribution Center Locale	0	9	0	9	3	177
4	Inventory System	1	5	1	9	0	136
5 Check Customer Allotment	Customer Database	1	3	1	0	9	82
6 Pack/Ship DVD	Customer Database	1	9	0	0	0	81
7	Shipping	0	9	0	0	5	106

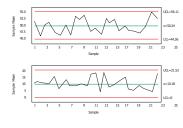
Common Cause & Effect Diagram Categories





Control Charts

X-bar-R Chart of Sample 1, ..., Sample 25



Control Plan

Process Step	What's Controlled?	Input or Output?	Spec. Limby' Requirements	Nessurement Nethod	Caritrol Method	Sample Sate	Prequency	Where is it Recorded?	Decision Rule/ Connective Action	SOPI

Visual Controls

