

Petal Conception Selection						
	C-Magnets	Current	Fly Wheel	Electromag.	Bike Assembly	Flywheel Band
Feasibility	0	0	0	0	0	0
Knowledge	-	0	0	-	0	0
Complexity	-	0	0	-	0	0
Safety	0	0	0	0	-	0
Ease of Repair	-	0	0	-	0	0
Custom Parts	-	0	-	-	0	-
Realistic	+	0	+	+	+	+
Smooth	+	0	+	+	+	+
Adjustable Resistance	+	0	+	+	0	+
Cost	-	0	0	-	0	0
Durability	0	0	0	+	0	-
Total	-2	0	2	-1	1	1

Comparison:
 None ranked higher than selected concept
 None ranked higher than selected concept
 None ranked higher than selected concept
 None ranked higher than selected concept
 None ranked higher than selected concept
 Parts may be possible to get from vendors, but spinning bike flywheels may be too heavy for patient

None ranked higher than selected concept
 Wear of bearings will be nominal and wear of friction pad is acceptable since this is an off the shelf

Note: Current Bike system served as the baseline and received a 0. Concepts that met the criteria better than the current and concepts that did not meet the criteria as well were assigned a -. If the criteria on the right hand side provide an explanation

Tilt Concept Selection						
	Gas Shock	Springs	Bell Crank	Roller Track	Bungee Cords	Current
Feasibility	0	0	0	0	0	0
Knowledge	0	+	0	0	+	0
Complexity	0	+	-	-	+	0
Safety	0	0	0	0	0	0
Ease of Repair	0	0	-	-	+	0
Custom Parts	0	0	-	-	0	0
Discrete Range	+	+	+	+	+	0
Smooth thru range	+	+	+	+	+	0
Adjustable Resistance	0	+	+	0	+	0
Cost	0	0	0	0	0	0
Durability	0	0	0	0	0	0
Simple Use for PT	-	0	-	+	+	0
Electricity Required	+	+	+	+	+	0
Noise	+	+	+	+	+	0
Total	3	7	1	2	9	0

Comparison:
 None ranked higher than selected concept
 None ranked higher than selected concept
 None ranked higher than selected concept
 None ranked higher than selected concept

Note: Current Bike system served as the baseline and received a 0. Concepts that met the criteria better than the current and concepts that did not meet the criteria as well were assigned a -. If the criteria on the right hand side provide an explanation

Display Interface Design Concept Selection					
	Digital	Mechanical	Current	LED	Touch Screen
Feasibility	-	0	0	0	-
Knowledge	-	0	0	0	-
Complexity of Circuit	-	+	0	0	-
Intuitiveness for Patient	0	+	0	0	+
Custom Parts	-	0	0	0	-
Discrete Range	+	+	0	+	+
Audible Feedback	+	+	0	+	+
Cost	-	-	0	0	-
Simple to Use by PT	0	+	0	0	0
Objective Feedback	+	+	0	+	+
Total	-2	5	0	3	-1

Comparison:
 Off the shelf parts are being heavily researched, customer understands if no suitable, cost effective display is available
 See above comment

Note: Current Bike system served as the baseline and received a 0. Concepts that met the criteria better than the current and concepts that did not meet the criteria as well were assigned a -. If the criteria on the right hand side provide an explanation

Frame and Handlebars Concept Selection				
	Current	Mounted SI	Custom	Real Bike Frame
Feasibility	0	0	0	+
Knowledge	0	0	0	0
Complexity	0	-	+	+
Safety	0	0	0	0
Ease of Repair	0	0	-	0
Custom Parts	0	0	-	+
Low Step Through	0	-	+	-
Adjustable Handlebars	0	+	+	-
Ergonomically Correct	0	+	+	0
Simple to Use by PT	0	+	+	+
Weight	0	-	0	0
Cost	0	-	0	-
Durability	0	0	0	0
Total	0	-1	2	1

Comparison:
 Design knowledge and concepts were based on aspects of real bikes
 Customer will be provided with an owner's manual and list of part numbers should repair be necessary
 See above comment
 None ranked higher than selected concept
 None ranked higher than selected concept
 None ranked higher than selected concept

Note: Current Bike system served as the baseline and received a 0. Concepts that met the criteria better than the current and concepts that did not meet the criteria as well were assigned a -. If the criteria on the right hand side provide an explanation