

New Product Development in the Sporting Sector

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A. Summary of Need Areas

Based on our findings from our Stage 1 Report, we uncovered four main need areas with regard to developing a tracking wearable:

1. Instant feedback/guidance. Gym-users want a method of evaluating form and providing instant feedback to correct or maintain it, as to increase safety and prevent injury.
2. Easy and worthwhile. Gym-users, with some being under time constraints, want their trip to the gym to be easy and worthwhile.
3. Affordability. Gym-users are extremely interested in accurately tracking their workouts, and desire an affordable yet innovative alternative to traditional tracking wearables that may not be as precise.
4. Aesthetics. Gym-users want their tracking wearables to be stylish, modern, and fashionable.

B. Qualtrics Survey Items

Based on our need areas and findings in our Stage 1 work, our group developed five statements for each of our four need areas. These questions were used to gauge consumer perception for each of our three main competitors: Nadi X Yoga Pants, Athos Apparel Leggings, and the Physiclo Pro Resistant Tights. Respondents rated items on a seven-point Likert scale (Strongly Agree, Agree, Somewhat Agree, Neither Agree Nor Disagree, Somewhat Disagree, Disagree, Strongly disagree).

Need Area #1: Instant feedback and guidance

- This product gives me feedback.
- This product corrects my form.
- This product tracks my performance.
- This product gives me confidence in my workout.
- This product makes me feel safe.

Need Area #2: Easy and Worthwhile

- This product makes my workout more efficient.
- This product makes my workout more effective.
- This product does not restrict my workout.
- My workout is faster with this product.
- This product saves me time.

Need Area #3: Affordability

- This product is affordable.
- This product is worth the money.
- This product is within my budget.
- I can afford this product.
- This product is too expensive.

Need Area #4: Aesthetics

- This product looks ideal for the gym.
- The design of this product gives me pleasure.
- This product looks fashionable.
- This design reflects a stylish workout clothing item.
- This product would improve my style.

In addition to the twenty questions regarding need areas, we also asked respondents about their intentions to purchase our competitors' products:

- I would like to purchase this product.
- If I was in the market for this product category, I would buy this product.
- I consider this as my preferred product in this category.

We also collected some general demographic data that included gender, age, and ethnicity.

C. Survey Data Collection

Our team collected data by distributing our Qualtrics survey to friends, colleagues, and family that we knew used or are interested in incorporating tracking wearables in their daily lives and while at the gym. We also distributed our survey on forms of social media such as Facebook, Instagram, and LinkedIn. We sent our survey out to around 100 individuals and we were eventually able to gather responses from 41 unique respondents that were able to successfully complete the survey. In addition to the successfully completed surveys, 24 respondents failed to fully complete the survey and submit their responses, while 3 responses were submitted but lacked responses to the asked-for data; these individuals were removed from the final data set. In analysing our data, we found that the majority of respondents were female (58%). Most responses also came from those within the ages of 18-25 (78%). We also gathered responses from those within the ages range of 36-45, 46-55 or above.

D. Results

Our group ran our Qualtrics survey results through SPSS to discover our survey produced five significant factors (Eigenvalue >1), seen in the Scree Plot in Appendix B. However, we discovered only 3 of the factors maintained a constant value of .6 or greater. This challenged our survey's four factor outline and four need areas. Upon further inspection, we discovered the three significant factors from the analysis were instant feedback/guidance, affordability, and aesthetics. We came to this conclusion through evaluating the factor values assigned to each attribute. In the end, we chose the three attributes that had factor scores greater than or equal to 0.60. According to the SPSS data analysis report, the factor with the highest eigenvalue was feedback at 7.215.

E. Factor Coefficient Matrix

Factor Score Coefficient Matrix				
	Factor			
	1	2	3	
Please indicate how strongly y	0.2	-0.106	-0.02	
Please indicate how strongly y	0.183	-0.095	0.021	
Please indicate how strongly y	0.184	-0.082	-0.066	
Please indicate how strongly y	0.123	0.051	-0.012	
Please indicate how strongly y	0.088	0.001	0.01	
Please indicate how strongly y	0.165	0.051	0.006	
Please indicate how strongly y	0.057	0.052	-0.028	
Please indicate how strongly y	0.052	0.025	-0.054	
Please indicate how strongly y	0.199	-0.043	-0.013	
Please indicate how strongly y	0.134	-0.026	0.027	
Please indicate how strongly y	-0.042	0.008	0.306	
Please indicate how strongly y	0.019	0.01	0.174	
Please indicate how strongly y	-0.068	0.011	0.444	
Please indicate how strongly y	-0.012	-0.017	0.102	
Please indicate how strongly y	0.025	0.002	-0.074	
Please indicate how strongly y	0.008	0.109	-0.018	
Please indicate how strongly y	0.029	0.09	-0.007	
Please indicate how strongly y	0.003	0.129	0.025	
Please indicate how strongly y	-0.261	0.595	-0.083	
Please indicate how strongly y	-0.07	0.133	0.048	
Extraction Method: Principal Axis Factoring.				
Rotation Method: Varimax with Kaiser Normalization.				

F. Mean Scores by Competitors

Descriptive Statistics (Mean)			
	Nadi X Yoga Pants	Athos Apparel Leggings	Physiclo Pro Resistant Tights
1	2.34	2.1	3.51
2	2.59	2.63	3.12
3	2.71	1.93	4
4	2.66	2.51	3.15
5	3.44	3.24	3.71
6	2.41	2.54	2.83
7	2.34	2.51	2.61
8	2.78	2.9	3.02
9	3.51	3.61	3.78
10	3.44	3.68	3.93
11	4.34	4.85	4.17
12	4.05	4.15	3.95
13	4.24	4.56	4.17
14	4.05	4.49	4.07
15	3	2.78	3.24
16	2.71	2.56	2.34
17	2.88	2.83	3.02
18	2.29	2.93	2.85
19	2.37	2.93	2.76
20	3.05	3.73	3.2

G. Factor Scores by Competitors

Nadi X Yoga Pants (Factor Scores)				Athos Apparel Leggings (Factor Scores)			
	1. Feedback	2. Affordability	3. Aesthetics		1. Feedback	2. Affordability	3. Aesthetics
1	0.468	-0.24804	-0.0468	1	0.42	-0.2226	-0.042
2	0.47397	-0.24605	0.05439	2	0.48129	-0.24985	0.05523
3	0.49864	-0.22222	-0.17886	3	0.35512	-0.15826	-0.12738
4	0.32718	0.13566	-0.03192	4	0.30873	0.12801	-0.03012
5	0.30272	0.00344	0.0344	5	0.28512	0.00324	0.0324
6	0.39765	0.12291	0.01446	6	0.4191	0.12954	0.01524
7	0.13338	0.12168	-0.06552	7	0.14307	0.13052	-0.07028
8	0.14456	0.0695	-0.15012	8	0.1508	0.0725	-0.1566
9	0.69849	-0.15093	-0.04563	9	0.71839	-0.15523	-0.04693
10	0.46096	-0.08944	0.09288	10	0.49312	-0.09568	0.09936
11	-0.18228	0.03472	1.32804	11	-0.2037	0.0388	1.4841
12	0.07695	0.0405	0.7047	12	0.07885	0.0415	0.7221
13	-0.28832	0.04664	1.88256	13	-0.31008	0.05016	2.02464
14	-0.0486	-0.06885	0.4131	14	-0.05388	-0.07633	0.45798
15	0.075	0.006	-0.222	15	0.0695	0.00556	-0.20572
16	0.02168	0.29539	-0.04878	16	0.02048	0.27904	-0.04608
17	0.08352	0.2592	-0.02016	17	0.08207	0.2547	-0.01981
18	0.00687	0.29541	0.05725	18	0.00879	0.37797	0.07325
19	-0.61857	1.41015	-0.19671	19	-0.76473	1.74335	-0.24319
20	-0.2135	0.40565	0.1464	20	-0.2611	0.49609	0.17904
Score	2.8183	2.22132	3.72168	Score	2.44094	2.79303	4.15523

Physiclo Pro Resistant Tights (Factor Scores)			
	1. Feedback	2. Affordability	3. Aesthetics
1	0.702	-0.37206	-0.0702
2	0.57096	-0.2964	0.06552
3	0.736	-0.328	-0.264
4	0.38745	0.16065	-0.0378
5	0.32648	0.00371	0.0371
6	0.46695	0.14433	0.01698
7	0.14877	0.13572	-0.07308
8	0.15704	0.0755	-0.16308
9	0.75222	-0.16254	-0.04914
10	0.52662	-0.10218	0.10611
11	-0.17514	0.03336	1.27602
12	0.07505	0.0395	0.6873
13	-0.28356	0.04587	1.85148
14	-0.04884	-0.06919	0.41514
15	0.081	0.00648	-0.23976
16	0.01872	0.25506	-0.04212
17	0.08758	0.2718	-0.02114
18	0.00855	0.36765	0.07125
19	-0.72036	1.6422	-0.22908
20	-0.224	0.4256	0.1536
Score	3.59349	2.27706	3.4911

H. Factor Analysis Score

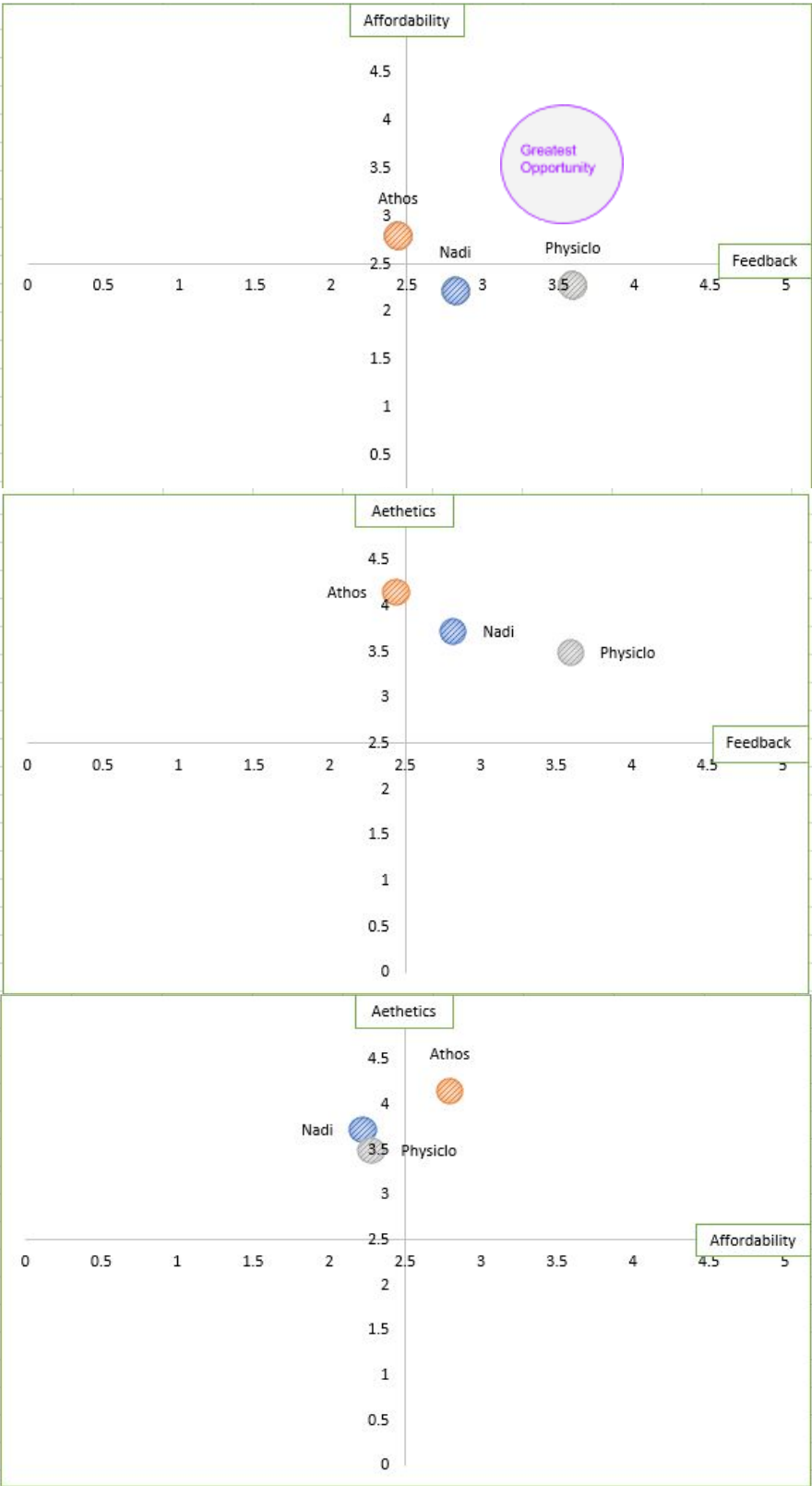
	Nadi X Yoga Pants	Athos Apparel Leggings	Physiclo Pro Resistant Tights
Feedback	2.8183	2.44094	3.59349
Affordability	2.22132	2.79303	2.27706
Aesthetics	3.72168	4.15523	3.4911

Since the overall factor scores ranged from 2.22132 to 4.15523, we determined that the market is deficient in the factors closer to 2 and sufficient in the factors closer to 4.50. In addition, the average score of each factor can help us determine which factors the present market is lacking the most. By calculating the average score of each factor, we established that our competitors were insufficient in affordability (an average score of 2.43047) and providing feedback (an average score of 2.95091).

I. Gap Maps

According to the data above, the need areas reside between feedback/guidance, affordability, and aesthetics. We analyzed each map and used to determine the gaps our product could potentially fulfill (see Appendix A). In the map, we decided to set the ranges 0 to 4.5/5 on the axes because they represented our data's factor score sums. We used aesthetics as the vertical axis and feedback as the horizontal axis. Our competitors were spread throughout the map with Physiclo dominating feedback and Athos as the leader in aesthetics. The future product would have to be in the upper right corner of this map. When contrasting aesthetics and affordability the new product would have to compete in terms of aesthetics and differentiate itself in affordability. The gap map which compared affordability and feedback we can see that the need area is in the upper right corner. In this map the new product would need to provide quality feedback at an affordable price. With these results, we can confidently say that the new product needs to focus on affordability and providing feedback/guidance. Ultimately, the future product will need to improve on providing feedback/guidance, affordability, and aesthetics.

Appendix A



Appendix B

