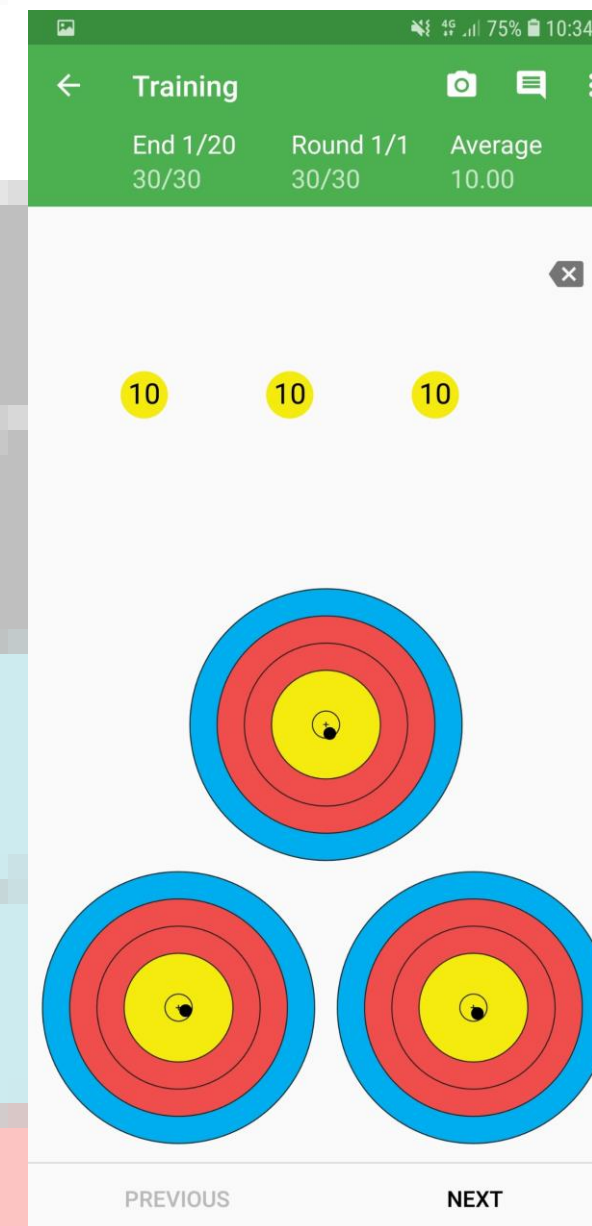


Implementation of Scoring applications for use in Archery by Steffan J. Benson (P151818)

Prototype – Functionality Simulator

- Developed in Excel, demonstrates basic functions essential to scoring systems.
- Data input handled by series of dropdown lists.
- Automatic mathematical functions provide live score updates.
- Mathematical functions and data verification to compute average arrow score, total number of hits and total number of golds.
- Due to time constraints and lack of knowledge in Visual Basic, larger database functionality was not viable.



Existing Recreational Scoring Apps

- Several apps available on both Android and Apple iOS devices.
- Archery Companion offers greater simplicity.
- MyTargets offers greater in-depth analysis features.
- Common features include basic UI and page transition, manual score inputting and data review features.
- Non-essential features include graphical data representation and bow information/tuning features.

Archer 1 - Functionality Simulation										
Bowstyle:	Compound									
Round:	Portsmouth									
Arrow Scores (#)										
End #	1	2	3	End Total	4	5	6	End Total	1/2 Doz Total	Running Total
1	10	10	10	30	10	10	10	30	60	60
2	10	10	10	30	10	10	9	29	59	119
3	10	10	9	29	10	9	9	28	57	176
4	10	9	9	28	10	10	10	30	58	234
5	10	10	9	29	10	10	10	30	59	293
6	9	9	9	27	10	10	9	29	56	349
7	10	9	9	28	10	10	10	30	58	407
8	10	10	10	30	10	10	10	30	60	467
9	10	10	8	28	10	10	9	29	57	524
10	10	9	9	28	10	10	10	30	58	582
Average Score per Arrow				9.7						
Number of Golds				59						
Hits				60						

Purpose of the project

- Scoring Applications are separated into 2 categories, Recreational systems and Competitive systems.
- Abundance of Recreational apps.
- Competitive scoring dominated by lanseo system.
- No systems that bridge the gap between Recreational and Competitive Scoring.
- Purpose of this project is to analyse current market, develop requirements list and implement a prototype software.

Portsmouth : 559

Target - 20 yd							E.T.	R.T.
9	9	9	9	9	9	9	54	54
10	9	9	9	9	9	9	55	109
10	10	9	10	10	9	9	58	167
9	9	9	10	9	9	9	55	222
10	9	9	9	9	9	9	55	277
9	9	9	10	10	9	9	56	333
10	10	10	9	9	9	9	57	390
10	10	9	10	9	9	9	57	447
10	9	9	10	9	9	9	56	503
10	9	9	10	9	9	9	56	559
Total							559	559

Project Outcome & future improvements

- Implementation of Android app and database not achieved due to lack of knowledge of Java or Visual Basic languages, used in Android SDK and Excel respectively.
- Market analysis and some user opinions show a unified system is desirable.
- Project of this scale requires longer timescale or larger team to develop each system individually.

18m-1		18m-2		Tot.	Hits	Golds
252	1	253	1	505	60	
248	2	253	2	501	60	1
242	4	248	3	490	60	1
246	3	241	5	487	60	
235	7	241	5	476	60	
242	5	226	12	468	60	
221	10	239	7	460	60	
218	12	238	8	456	60	
223	9	233	9	456	60	
213	14	241	4	454	60	1
235	6	217	13	452	60	
219	11	228	10	447	60	
217	13	228	11	445	60	
213	15	204	16	417	60	
230	8	185	20	415	58	
196	18	209	14	405	59	
203	16	192	18	395	59	
189	19	200	17	389	59	
166	23	207	15	373	60	
183	20	187	19	370	60	
196	17	167	22	363	57	
170	21	170	21	340	58	
169	22	156	23	325	59	
133	24	124	24	257	53	
127	25	109	25	236	50	
103	26	105	26	208	46	
34	27	82	27	116	28	

Existing Competitive Scoring Systems

- Competitive scoring dominated by lanseo system, developed by a team of 5 in conjunction with the Italian Archery Federation.
- Development began in early 90s, usable product introduced to competitions in 2006.
- System allows for manual score inputs or automatic transfer from tablet devices. (Tablets only work in conjunction with competitive software)
- Typically relies on paper scorecards as a back up.
- Based on personal experience from BUCS Indoor Championships in 2018, system is unreliable when using tablet devices and Wi-Fi connection.