SAM PuttLab
System and concept

GoToMeeting seminar 02.04.2020
France

What do numbers tell us?

BSTIME	SDBSTIME	FSTIME	SDFSTIME	BSRATIO	SDBSRATIO	TAMAX	SDTAMAX	TVMAX	SDTVMAX
662,8	19,46	911,4	51,10	0,728	0,0326	208,8	21,87	294,4	51,00

TIMP	SDTIMP	TAMIN	SDTAMIN	TEND	SDTEND	RHYTHM	SDRHYTHM	TIMING	SDTIMING
289,2	3,83	423,0	27,45	625,8	51,20	2,29	0,068	0,317	0,0152

VSYM	SDVSYM	XADR	SDXADR	XSTART	SDXSTART	XIMP	SDXIMP	XEND	SDXEND
0,321	0,0382	9,62	1,914	224,90	4,154	-0,92	0,095	-309,50	9,563

BSPATH	SDBSPATH	FSPATH	SDFSPATH	PATHSYM	SDPATHSYM	SPOTADR	SDSPOTADR	SPOTIMP	SDSPOTIMP
215,60	3,189	543,65	1		0,0091	-7,71	0		8

Aim angle

Impact angle

HEIGHTADR	SDHEIGHTAD	HEIGHTIMP	SDH		SDVMAX	VIMP	SD		MAX
0,33	0,181	4,97	0,540	1358,1	131,92	1502,3	25,83	7067,8	582,70

AIMP	SDAIMP	AMIN	SDAMIN	FACEADR	SDFACEADR	FACESTART	SDFACESTAI	FACEIMP	SDFACEIMP
240,5	448,22	-4497,2	409,78	3,15	0,352	8,10	0,381	-0,15	0,390

FACECHANG	SDFACECHAN	FACEEND	SDFACEEND	DIRECT	SDDIRECT	FACEPATH	SDFACEPATH	BALLDIR	SDBALLDIR
-3,31	0,377	-14,03	0,595	0,09			0,259	-0,11	0,266

SD of Aim

SD of Impact

BALLDIR	SDBALLDIR	ROTIMP	SDROTIMP	ROTENL		TOT	SDROTTOT	ROTRAT	
-0,11	0,366	8,26	0,276	13,87	0,444	22,13	0,261	-73,05	4,208

YIPS	SDYIPS	WBEFORE	SDWBEFORE	WAFTER	SDWAFTER	WTOBEFORE	DWTOBEFO	WTOAFTER	DWTOAFTE
781,84	103,026	4,72	0,467	-5,47	0,285	4,88	0,192	5,32	0,230

FACEBREAK	SDFACEBREA	ARC	SDARC	RELROT	SDRELROT	SHAFTADR	SDSHAFTADF	SHAFTIMP	SDSHAFTIMF
-0,43	0,131	5,72	1,973	-8,45	0,742	-0,96	0,249	-1,52	0,389

LIEADR	SDLIEADR	LIEIMP	SDLIEIMP	RISE	SDRISE	DYNLOFT	SDDYNLOFT	LAUNCH	SDLAUNCH
-0,61	0,217	-0,05	0,102	3,28	0,159	4,52	0,389	4,27	0,299

Science & Motion
Golf

1SD contains
68.3% of the data

68.3%

31.7%

SD -3   -2   -1   0   1   2   3 SD
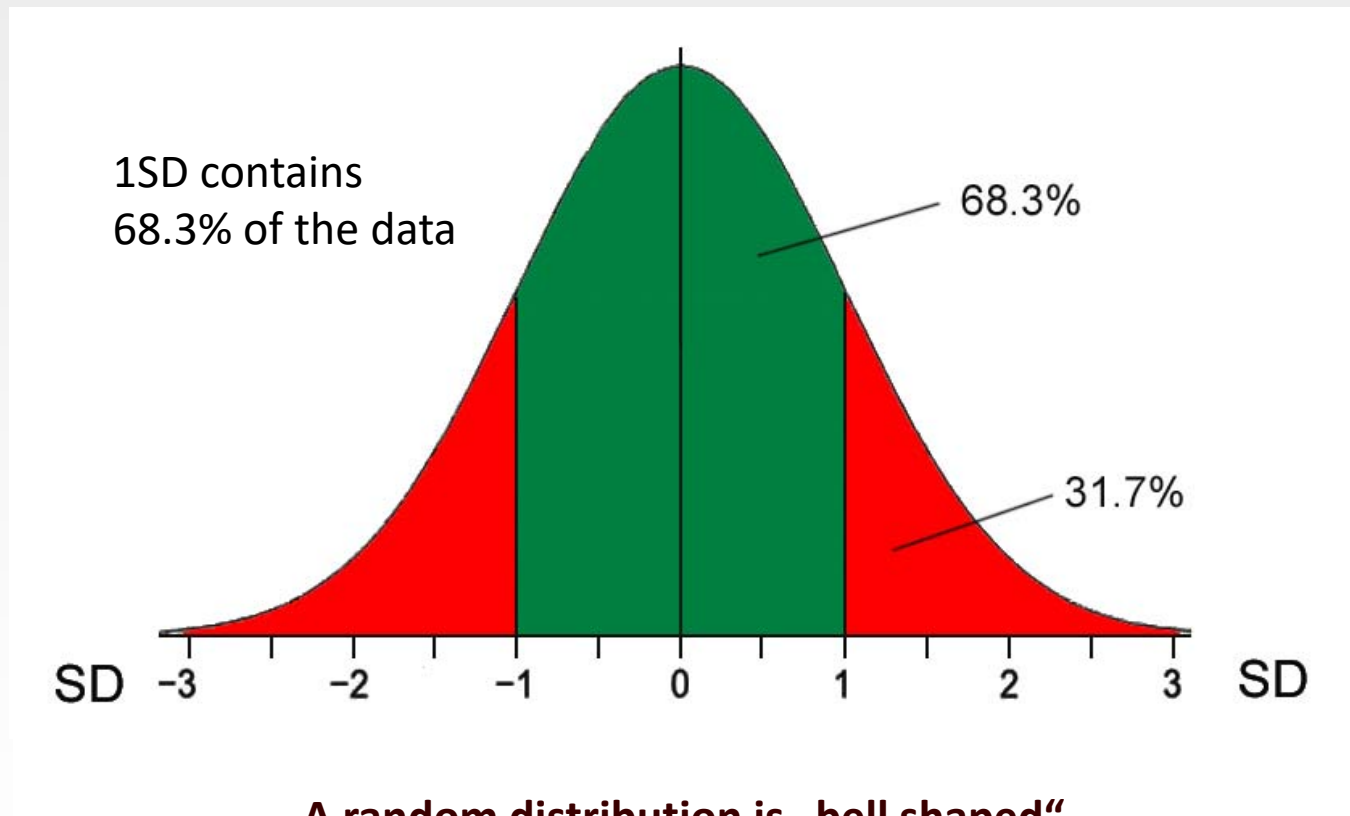
A random distribution is „bell shaped"

Score definition

1SD corresponds to 75% performance (2SD=50%, 3SD=25%)

Assessment
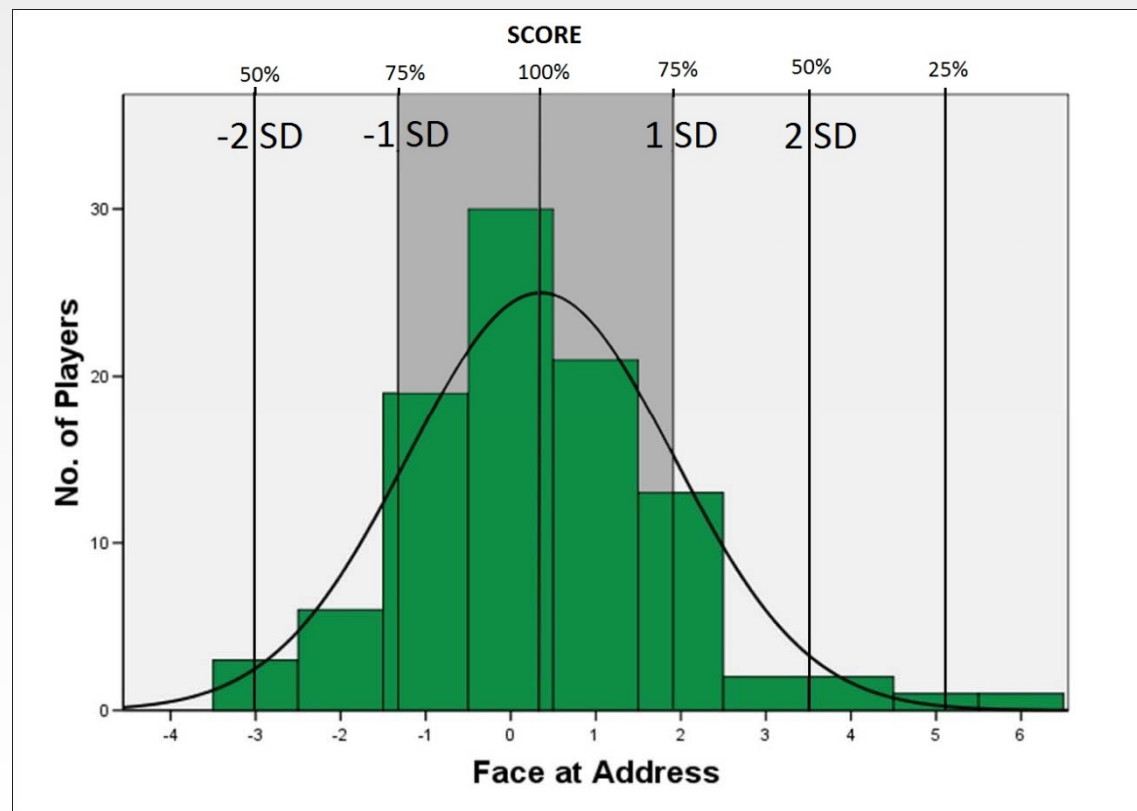
- Start with a structured interview with the student

- Use PuttLab to evaluate the individual performance profile

- Identify strengths and weaknesses

- Check extreme techniques and low consistencies

- Consider the hierarchy of movement

- Collect more in depth information if needed

- Then decide which aspect to work on
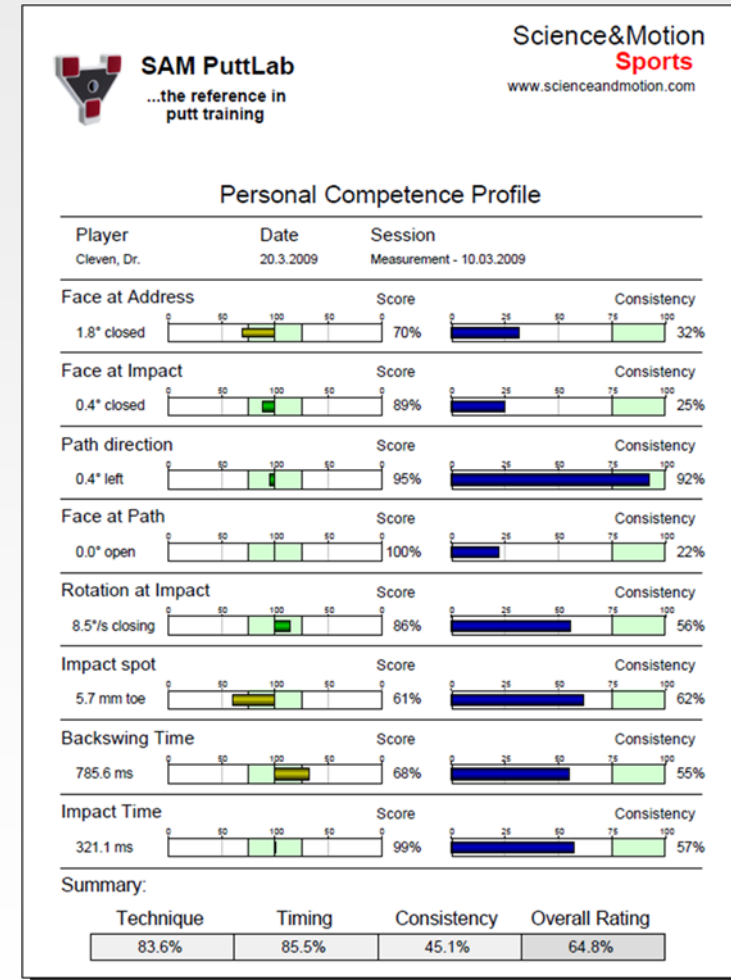
Tendencies & Technique

Tendencies are deviations from a *neutral* technique and *deviations* from average Tour performance

- reflect a lack of skill

- also reflect compensations

- must not be *negative* per se

- can also reflect individuality

- might even increase consistency

- still are critical for performance outcome

- should be limited
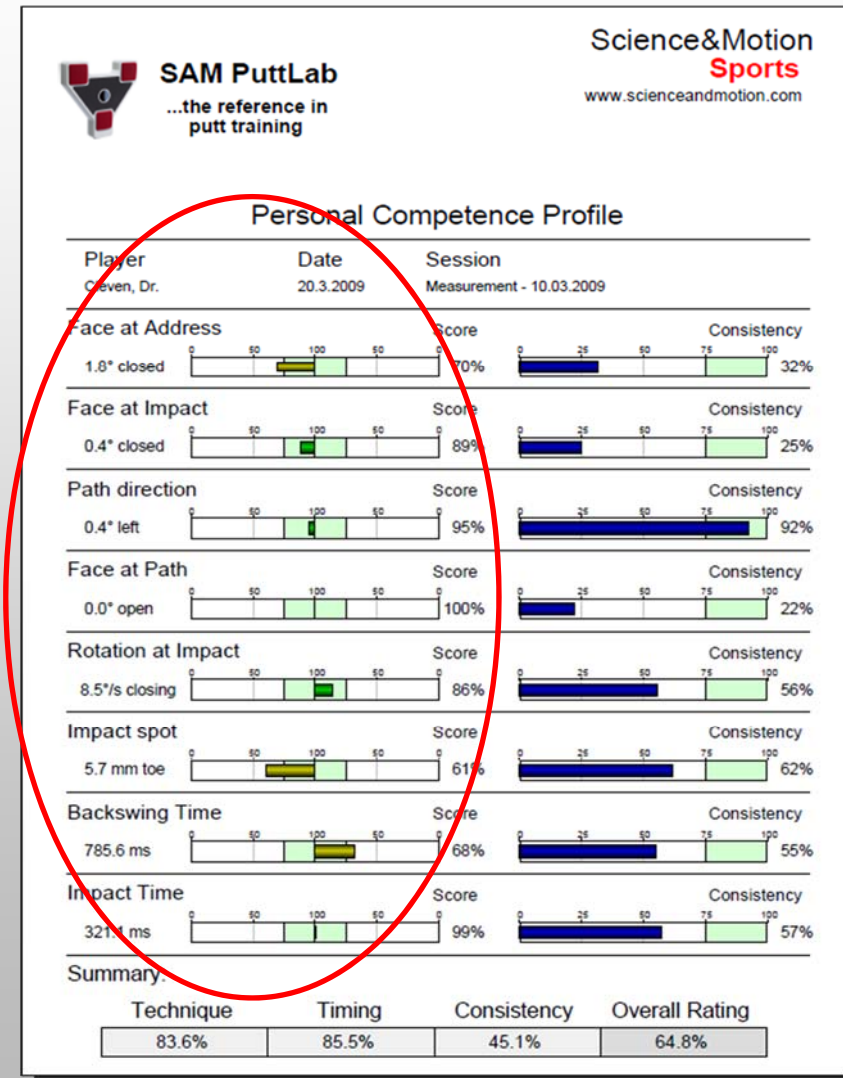
Consistency

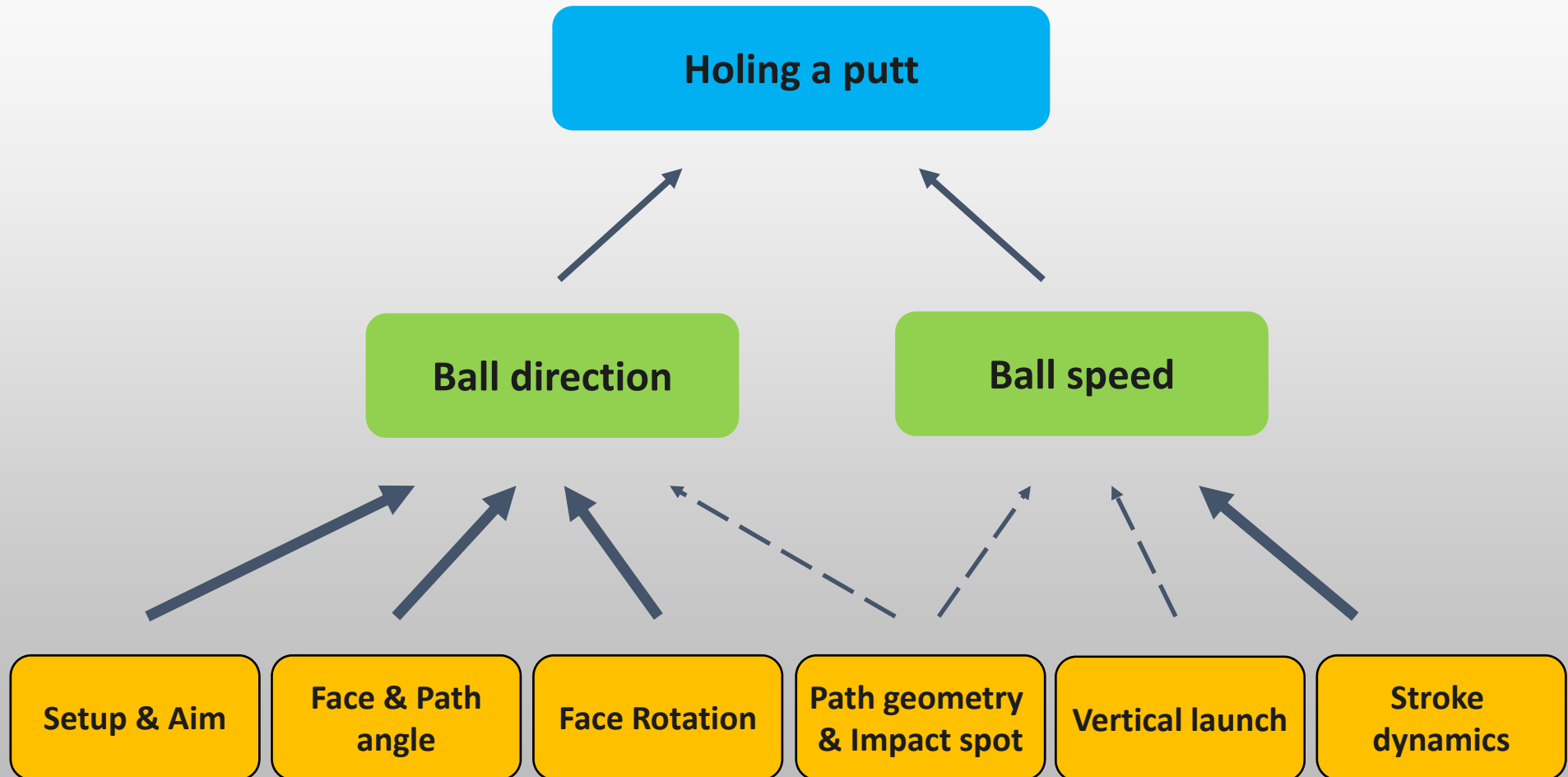Consistency reflects the level of movement automation and is the result of a learning process

- can not consciously be controlled

- arises from *synergy*

- consistent compensations can still create a consistent result

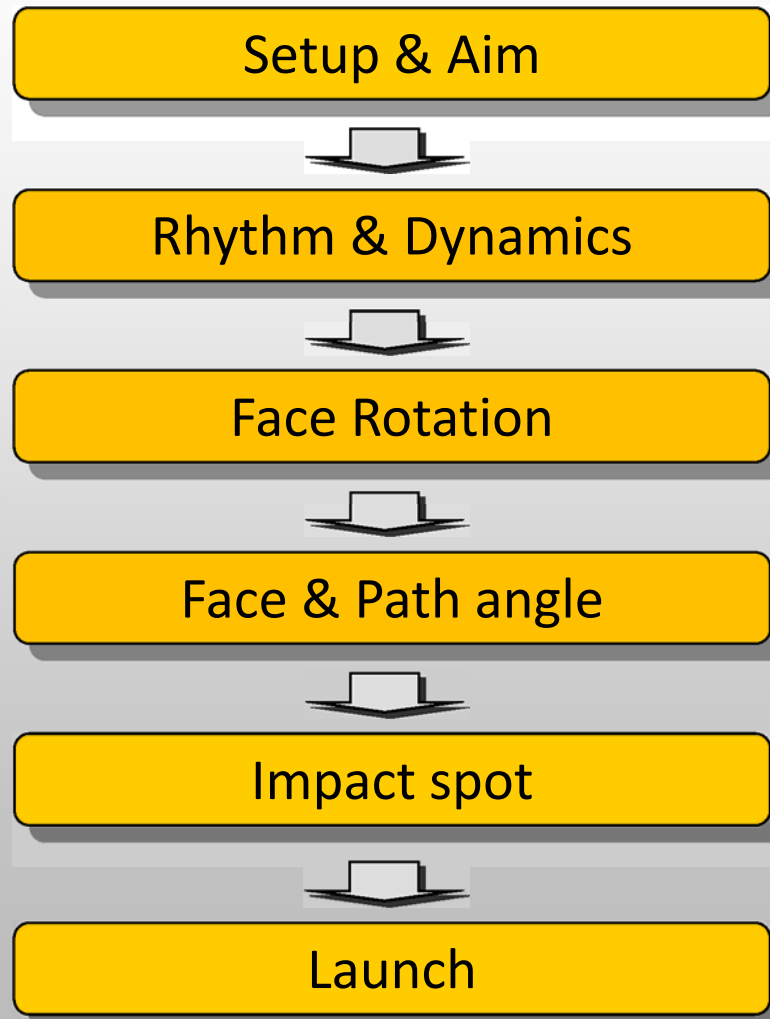- are very critical for performance outcome

- should always be high

Science & Motion
Golf

Read Green

Preparation

Stroke

Impact

Ball action
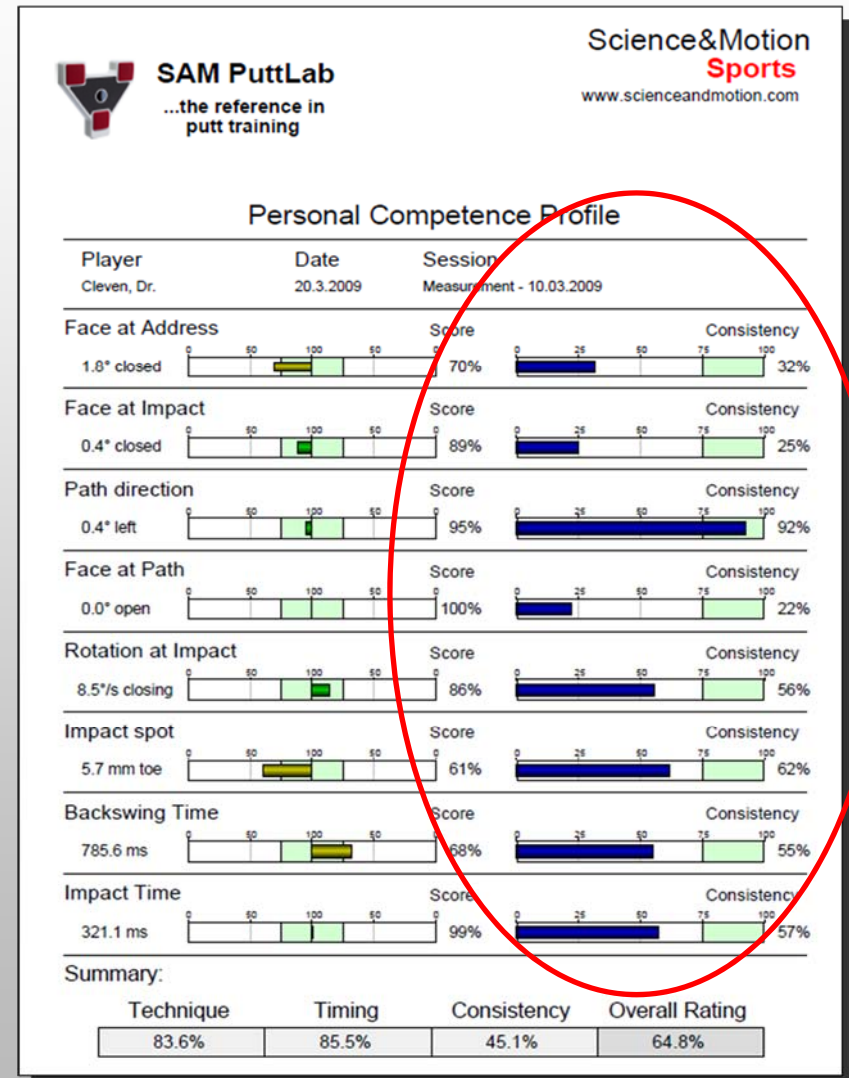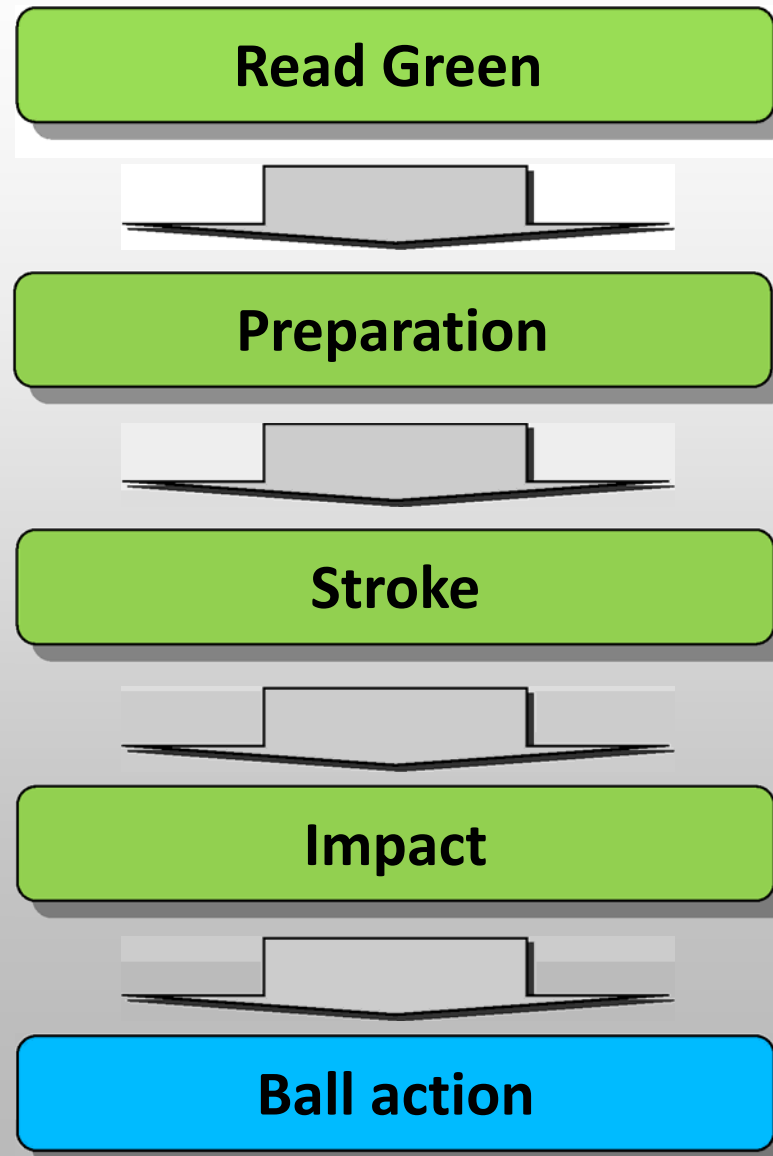
Relevant parameters

Relevance of PuttLab parameters for Direction and Distance control:

	Direction Control	Distance Control
Setup & Aiming	X	
Face & Path at impact	X	
Impact spot	(x)	(x)
Face Rotation	X	
Loft & Rise		(x)
Rhythm & Dynamics		X
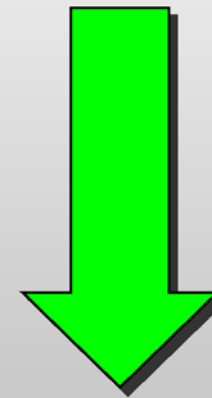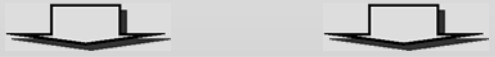
SAM EasyFit Protocol Overview

Science & Motion Golf

Posture and setup position

Select: **Length**

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Use calibrated **fitting putter**

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Measurement: PuttLab Fitting

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Select: **Head type**
Select: **Head balance**
Select: **Loft**
Select: **Lie**
Select: **Grip**

↓

Print Specification

Selection scheme
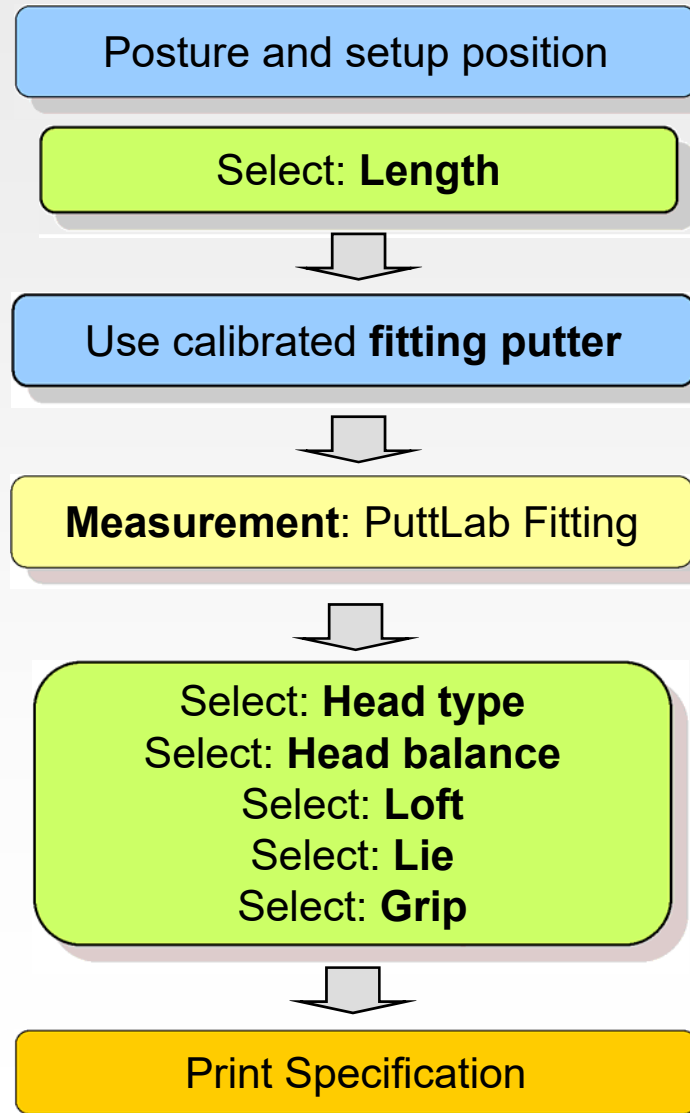
Factor	Selection depends on:
Length	Find a neutral setup using mirror or camera
Head Type	Assess arc and absolute rotation
Head Balance	Assess rotation relative to path
Loft	Adjust loft and rise angle for optimal launch and spin
Lie	Putter is flat onto the ground
Grip	Consistency of Rotation, consistent putting
Shaft, Offset	Check direction and consistency of aiming
Additional head weight	Supports a pendulum like movement, slows down swing times
Shaft weighting	Calms the hands, improves inconsistent rotation