Leicester City Football Club

ITRC Presentation

2022

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A bit about me.

- Simon Gibson.
- Senior sports turf and grounds manager at LCFC.
- Overseeing both the King Power stadium and our womens training facility.
- Studied sports science at university.
- Started this as a summer job over 20 seasons ago.
- Worked at both stadiums and training grounds.
- Part of our sports turf department senior management team.
- Managed the design and installation process of the new pitch at King power stadium.

The data driven approach.

Background

15 years to this point.

Cross department learning with physiotherapy
and sports science.

Original purposes.

The data driven approach.

The WHY?

These areas are our 0.1%s- the fine margins. No improvement is too small and when added together they become quite significant.

2 main areas: 1- to improve what we are already doing.
                    2- to find out 'why'

The data driven approach.

What is it?

We use several different strands of data collection to help inform decisions on pitch maintenance but this data also goes directly to the sports science department to aid in their decision making processes such as rehab for players, injury prevention and knowing potential fatigue levels.

This gets split into 3 main areas for us.

The data driven approach.

Raw stadia

This is our playability portal for our pitch testing.

Areas we measure:
Hardness-
Energy restitution-
Shock absorption-
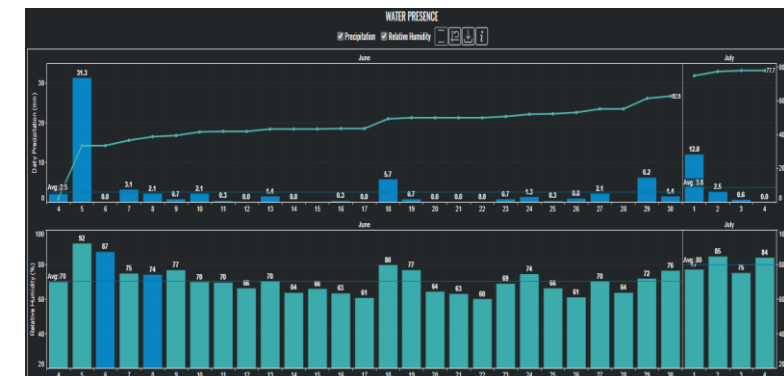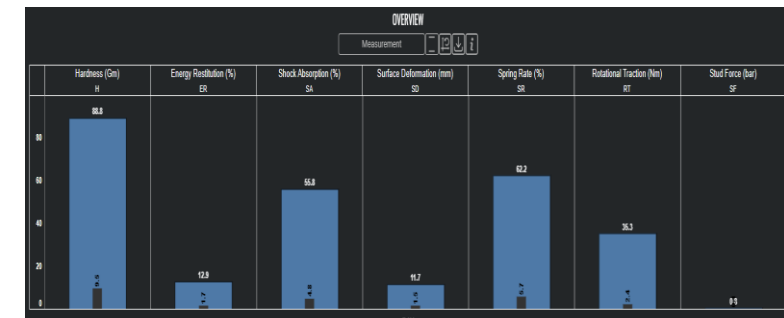Surface deformation-
Spring rate-
Stud force-
Rotational traction-
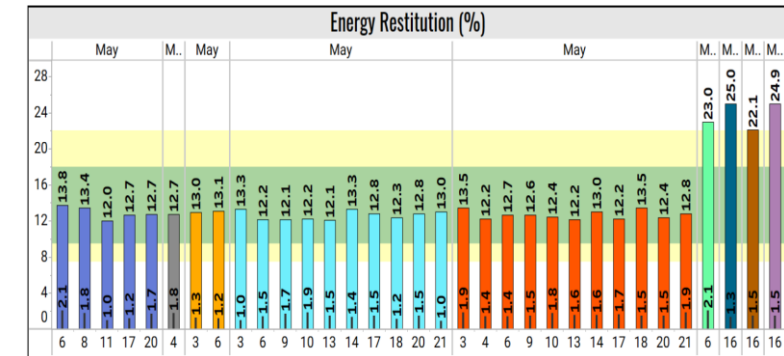Density-
Moisture content-
Infiltration rate-
Electrical conductivity-

The data driven approach.

SGL portal

What data we collect:

Natural light

Pitch usage (also historical)
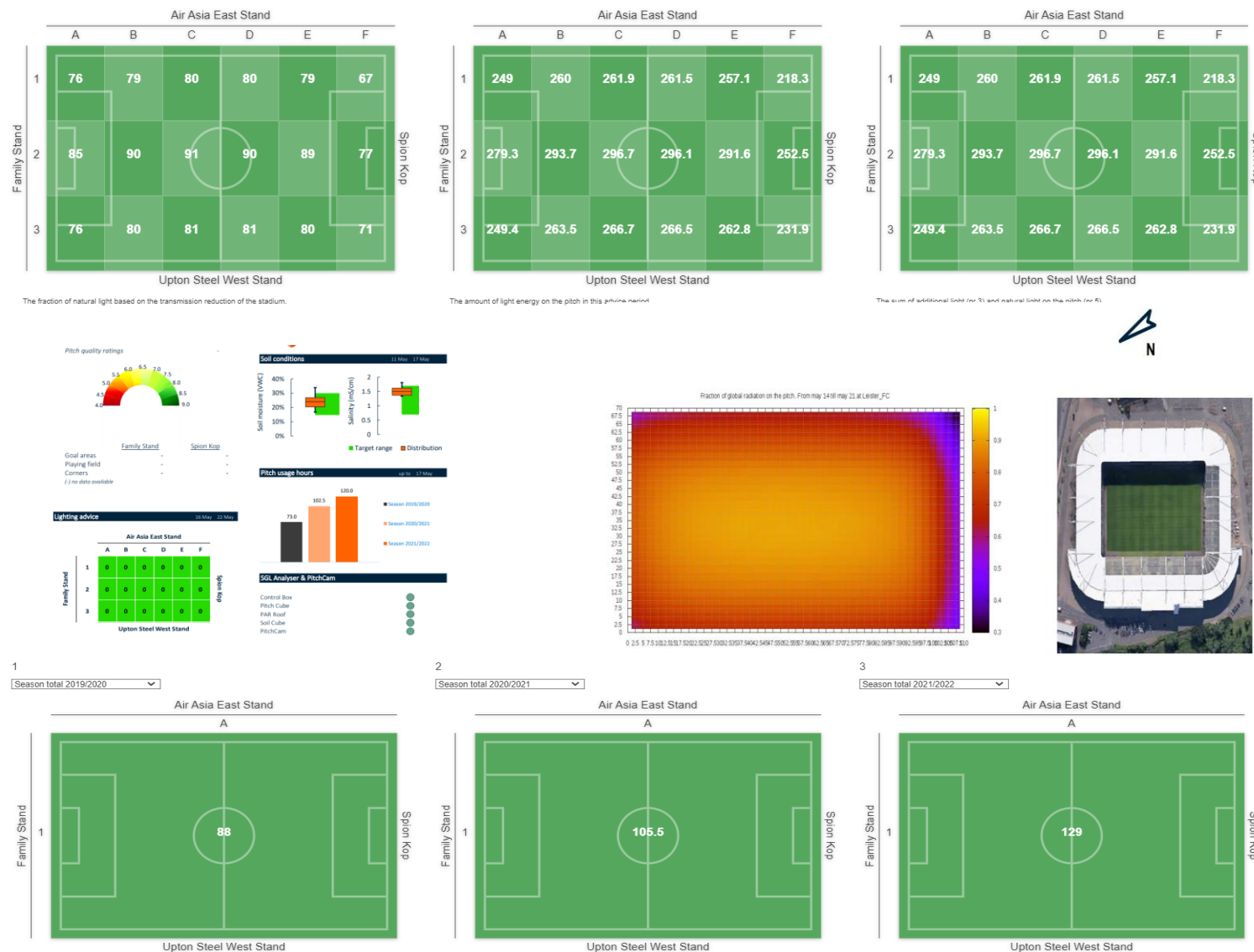
Lighting hours

Rainfall

Humidity

Salinity

EC

Replicated pitch testing

Temperature

Leaf wetness

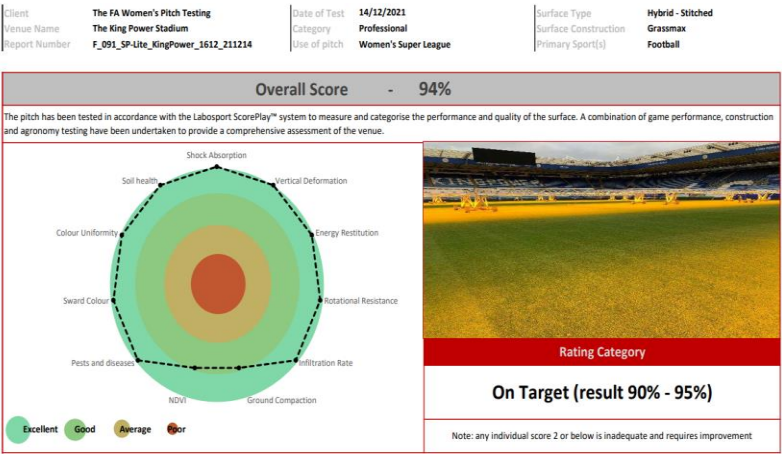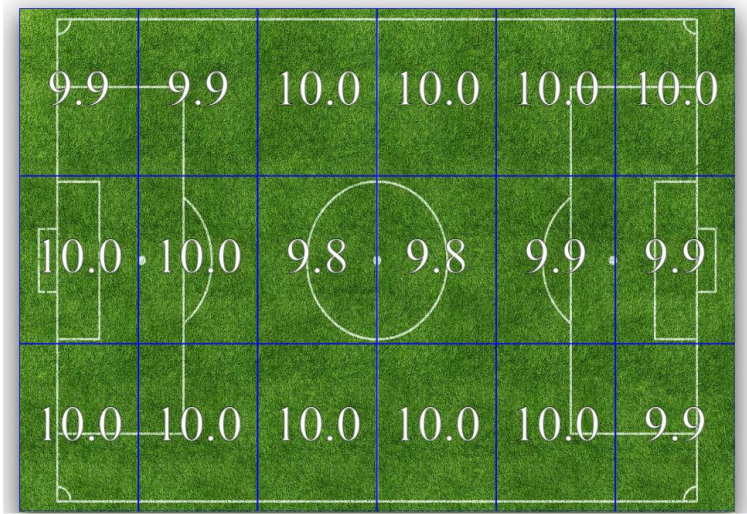Photographs

The data driven approach.

Agronomical data:

What data we collect:
Soil nutrient content
Ph
Leaf tissue samples
Disease risk
Disease occurrences
Water usage
Root depth
Infrared camera

Physical analysis	KING PWR	Guidelines
pH	6.3	5.5 - 7.49
CEC meq/100g	6.8	> 10
E.C. (Sat. CaSO4) mS/cm	2.2	0 - 2.49

Nutrients (exchangeable)	KING PWR	Guidelines
Calcium ppm	358	500 - 1700
Potassium ppm	46	71 - 180
Magnesium ppm	39	51 - 110

Nutrients (available)	KING PWR	Guidelines
Phosphorus ppm	21.2	11 - 50
Sulphur as SO4 ppm	37.0	21 - 150
Zinc ppm	0.5	5 - 8
Manganese ppm	6.7	7 - 15
Copper ppm	0.4	5 - 6
Iron ppm	21	76 - 150

Client	The FA Women's Pitch Testing	Date of Test	14/12/2021	Surface Type	Hybrid - Stitched
Venue Name	The King Power Stadium	Category	Professional	Surface Construction	Grassmax
Report Number	F_091_SP-Lite_KingPower_1612_211214	Use of pitch	Women's Super League	Primary Sport(s)	Football

Overall Score - 94%

The pitch has been tested in accordance with the Labosport ScorePlay™ system to measure and categorise the performance and quality of the surface. A combination of game performance, construction and agronomy testing have been undertaken to provide a comprehensive assessment of the venue.

Rating Category

On Target (result 90% - 95%)

Note: any individual score 2 or below is inadequate and requires improvement

Excellent Good Average Poor

ZINC	Result	Very Low	Low	Risk of Deficiency	Normal	Becoming Excessive
EDTA Extractable Zinc mg/l	0.5					

CALCIUM	Result	Very Low	Low	Risk of Deficiency	Normal	Becoming Excessive
Ammonium Nitrate Extractable Calcium mg/l	275.0					

IRON	Result	Very Low	Low	Risk of Deficiency	Normal	Becoming Excessive
DPTA Extractable Iron mg/l	21.3					

SULPHATE	Result	Very Low	Low	Risk of Deficiency	Normal	Becoming Excessive
Phosphate Buffer Extractable Sulphate mg/l	37.0					

MANGANESE	Result	Very Low	Low	Risk of Deficiency	Normal	Becoming Excessive
DPTA Extractable Manganese mg/l	6.7					

CEC	Result	Low		Medium		High
Estimated Cation Exchange Capacity meq/100g	4					

The data driven approach.

Final thoughts

We do all of this testing and data analysis to further enhance our decision making and management processes.

As with everything in our field- never underestimate the human touch, intuition, experience and common sense.

Developing and securing the next generation of sportsturf students

The Journey so far…

The Concept and design phase

Built on Solid Pillars…

SPORTS TURF ACADEMY

Training and Education
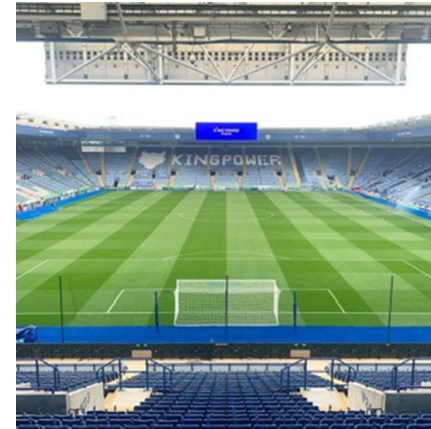
STATS – Sports Turf Academy Technical services

Trials and Research

Tournament Support

"The Double Bottom Line effect"

Training and Education

The problem…..

- Poor standard of education across the industry

- Lack of choices for school leavers.

- No central hub that harnesses theoretical knowledge with practical implementation.

- Skills Gap.

- No Parity of salaries across the industry.

- Apprenticeships.

- Specialist Provision.

- Graduate opportunities.

- What sets us apart?

- Create an aspirational place to learn!

STATS – Technical services

The Problem….

- Poor standard of Grassroots pitches.

- Lack of investment into local level playing surfaces.

- Cancelled matches due to poot pitches.

- Lack of training for grassroots volunteers.

- Cowboy contractors carrying out poor standard of work.

Target market - Grassroots clubs

We have developed our **5 step** process:

Engage with our community

Advise

Development of a bespoke Programme of works

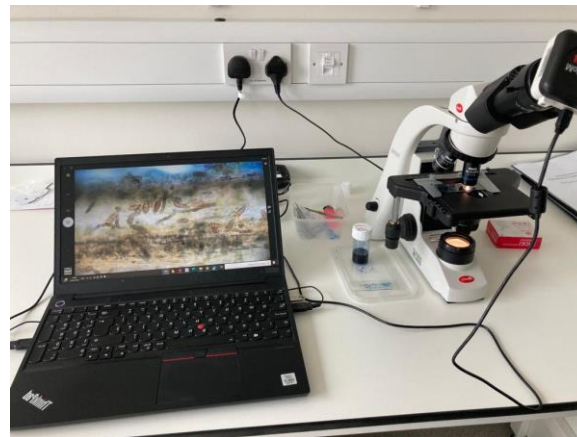**Implementation of works**

Follow up "The Customer Cuddle"

Trials and Research

The Problem….

- Lack of Independent research

- Clear voice for the industry.

- Black of Data around player interaction with the playing surface.

- Recruit a Doctor of Sports Turf (yes they exist)

- Build a laboratory and testing plots.

- Collect data.

- Develop relationship between football and sports turf.

- PROTECT THE ASSETS.

- Be a trailblazer.

Tournament Support

The Problem…

- International shortage of highly trained groundstaff to ensure tournament success.

- Playing surfaces failing at major tournaments across the world.

- No new talent emerging to fill the skills and staff shortage.

- UK Ground staff are regarded as some of the best in the world.

- We will produce a cohort of skilled professionals to support tournaments in the UK and across the globe.

- This will give tournament organisers / contractors or other sports clubs a highly trained, "ready to go" workforce.

- This will also give our students the opportunity to explore a variety of opportunities in the Sports Turf sector.

- "Double bottom line"

The next generation.

Doctor
Professor
Groundsman
Apprentice
Mechanic
Chemist
Biologist
Researcher
Man manager
Business manager
Presenter
Mathematician
Designer
Innovator
Athlete
Coach/ leader
Planner/ organiser
Data collector
Weatherman