Overview. Organization of people, especially in active environments like sport, is one of the most difficult organizational tasks. This is because non-sentient resources, once organized, do not have a mind of their own that can challenge or disturb the organizing system. On the other hand, humans, especially in volatile environments, are active resources that can voluntarily interact and behave however they want in pressure situations, making the concept of organizing players on sporting fields a highly interesting and demanding challenge. Soccer is a sport in which the organization and layout of the players on the field influences the final result immensely, and this case study will look at what organization principles go into planning out how players are arranged on the field and the interactions that could be supported by those arrangements, to provide the best chance of winning a game.

What is being organized? This is the fundamental question of the case study. For someone who is not cognizant of the various nuances that go into organizing resources, it would seem like there is only a single type of resource that is being organized here – the soccer players themselves. This is where the principles of resource properties come into the picture. Although the primary resources in this system are the soccer players themselves, what guides the organization of these players into formations are the player attributes, which are the secondary resources in this system.

A proof of this hypothesis is David Beckham. When he was a youngster, he had all the attributes that are required to be a winger – speed, youth and stamina. As he grew older, these attributes faded away – he became slower, older and his stamina reduced. While these attributes deteriorated, some other attributes improved with age – his playing experience increased, ball control improved and composure increased. Incidentally, these are the primary attribute requirements to be in the position of a midfielder in soccer, and David Beckham, once he turned older, was converted from a winger into a midfielder by his manager. To put this into perspective, the player himself remained the same throughout this aging phase, but because his attributes changed, he was now fit into a different location in the organizing system. Someone else who was fast, young and with stamina was brought in to replace Beckham’s vacant position at right wing. Thus, the organization of players in soccer is guided by their ‘intrinsic dynamic’ properties – their attributes. This means that every player as a resource has a ‘useful life’ or ‘effectivity’ period after which his attributes change and suit some other position. Thus, both the players and their attributes are important resources in this organizing system.

Although most of the organizing principles that will be mentioned are present across some other sports, the scope of this case study is limited to soccer to ensure clarity.

Why is it being organized? Sport, in many ways, is like war. An army consists of individuals with different attributes and traits that are more suited to specific roles. For example, the physically strong, young, and inexperienced recruits are usually in the ground forces. The much more experienced, seasoned and strategic individuals are appointed as generals. Airplane fighters are usually
characterized by strong vision, reflexes and composure. In this way, assigning specific roles to individuals based on their attributes provides the best chance of success to any organizing system. This is the exact reason that soccer players are strategically organized into formations – to provide a team the best chance of winning a game, by ensuring that every player’s attributes complement those of his teammates, and can also negate the attributes of the opponents. For example, if the opponent has very fast attackers, one wants stable experienced defenders in their team to negate those attackers. Thus, the goal is to enable optimal interactions between players of the same team and also with the opposing team.

This figure puts into perspective the importance of individuals with different attributes that fit into different roles on the field. The two highlighted players are the ‘midfielders’, and although they have the same name, they have drastically different roles to fulfill. The one highlighted in blue is a ‘destroyer’ – one who stays back, uses his physical strength and breaks up the other team’s play by tackling and doing the ‘dirty work’. The one in yellow is more of a ‘creator’ – someone who pushes forward and uses his skill and finesse to create attacking opportunities. Their positions on the field are completely different from the ones displayed on paper. In this way, every player has a different role assigned to them based on their attributes, and these attributes complement each other perfectly to provide the best chance of winning a game.

**How much is it being organized?** When a manager starts out with creating a team, he first envisions the formation he prefers the most. This formation consists of three digits denoting the number of players in defence, midfield and attack respectively. So 4-4-2 means 4 defenders, 4 midfielders and 2 attackers. After choosing the formation, he has to think about the attributes that he would require for every position in his formation. For example, the manager would want the attacker in his formation to have the attributes of speed, youth and height. This creation of categories is an important part of any organizing system, but an undoubtedly fundamental part of this one, because that will decide which players fit into which positions, and whether one player can fit into multiple positions. After the manager has a comprehensive understanding of which attributes he requires in each position, he then finds people who possess these
attributes and fits them into the respective positions. Thus, it is the player attributes that are organized, and only then are players who fit these attributes brought into the team.

The following figure is an example of a manager's defined resource descriptions, which in this case are the player attributes.

The extent of organization depends on the extent of category generation for every position on the field. Generation of these categories depends entirely on the manager of the team. One manager can have three attribute requirements for the 'right winger' position, like speed, youth and stamina, while another manager can have ten. If a manager specifies just two attributes that are essential to become a 'striker' in his team, then more soccer players would be able to fill in that role. But, if a manager decides to organize his formation more extensively and specifies ten attributes, then fewer players around the world would match his description of a striker.

The extent of organization also depends on how many factors a manager takes into account while creating categories of player attributes for every position. Does he care only about his team or does he also change his approach based on his opponents? Does he also care about the match situation – are we leading 1-0 or trailing 0-1? Does he also take into account smart resources and data analytics which give him the exact account of how fast a player is or how many miles a player runs in a match?

When is it being organized? The organization of the players can occur at two instances. One type of manager organizes his players 'on the way in' – He decides on one fixed formation and fits players into it, all before the game starts. This is the 'static model' of organization. All the organization takes place before the game starts, and there are no changes made to the formation once the game begins. This model is based solely on intrinsic dynamic properties, which are the players’ attributes. A manager decides on a particular formation and his list of required attributes, and never changes this formation. Maintenance of resources,
as years go by, is done by replacing older players with substitutes who have the exact same attributes for that position and can just fit in as an identical replacement. This is how the static model always keeps the formation fixed and utilizes players as ‘replaceable cogs’.

The other approach is evidenced in the ‘dynamic model’ of organization, where the manager changes the formation many times within a single game. This model is based on both the intrinsic dynamic player attributes and also the extrinsic dynamic factors like the game situation and the opposition. If the game is 0-0 and the team needs to attack, the manager will employ the attacking 4-4-2 formation, which has two attackers/strikers up front. When the team scores a goal and needs to preserve the lead, the manager can change the formation to a 5-4-1, which has five defenders at the back instead of four, making it a defensive formation. This type of dynamism occurs in the middle of games and requires flexible players that have attributes that satisfy requirements of multiple positions on the field. If a manager thinks architecturally, he will buy players who have a variety of attributes that can prove helpful in the dynamic model. If the striker, apart from his core attributes, has attributes like 'leadership', 'height' and 'physicality', the manager can convert that striker into a fifth defender ad-hoc, creating a much more defensive formation when needed. 

How or by whom is it organized? The manager of a team is primarily responsible for organizing players. This results in the creation of ‘individual categories’ while defining the attributes for every position. Every manager is different, and has different opinions about which attributes are valuable for a position on the field. Also, the barometer for attributes like ‘speed’ or ‘height’ is different for every manager. A player who can run 20 miles an hour might pass the requirement of being ‘fast’ in one manager’s system, but might not pass the requirements of another manager.

Other Considerations. A big consideration in this system is that the positional attributes that a manager specifies are not entirely stringent. There are tradeoffs involved that a manager is willing to make amongst the specified attributes. This implies that a player need not have every single attribute that a manager lists down as a requirement for a position. Every manager will create hierarchical categories of required attributes, arranged in order of importance. For example, the fundamental requirement for a right-winger is speed, but it is also ‘preferable’ that the right-winger be a young player. This is where the concept of tradeoffs comes into the picture for a manager. If the manager can find a player who is very fast, but very old in age, he/she can still fit this player into the formation because this player has the most important attribute needed to be a winger – speed. In this way, every manager has individualistic tradeoffs in their minds, and the hierarchy of required attributes they create guides which attributes are most important to them and which attributes can be overlooked if needed.

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1 Refer attached artifact videos titled ‘STATIC MODEL’ and ‘DYNAMIC MODEL’
202 On The Field
SAME ATTRIBUTES?

STRIKERS

SAME

CENTRAL MIDFIELDERS

ATTRIBUTES?
ORGANIZING RESOURCES

PROPERTIES

- DESTRUCTOR
- PHYSICAL
- TACKLER
- SPEED
- YOUTH
- STAMINA
- PLAYMAKER
- EXPERIENCE
- COMPOSURE
- SPEED
- YOUTH
- STAMINA
- SPEED
- YOUTH
- STAMINA
- SPEED
- YOUTH
- STAMINA
- YOUTH
- BALL CONTROL
- STABILITY
- LEADER
- HEIGHT
- PHYSICAL
- KEEPER
- HEIGHT
- SPEED
- PHYSICAL
- LEADER
- HEIGHT
- PHYSICAL
- KEEP•
Intrinsic Dynamic

Definition: Inherent properties; change over time.

Examples: Skills, experience
WHEN DO YOU CHANGE THE ORGANIZATION/FORMATION?

YOU DON’T

STATIC MODEL – ‘REPLACABLE COGS’

• INSTRINSIC DYNAMIC (PLAYER CHARACTERISTICS)

YOU DO

DYNAMIC MODEL

• INSTRINSIC DYNAMIC (PLAYER CHARACTERISTICS)
• EXTRINSIC DYNAMIC (OPPOSITION, GAME SITUATION)
STATIC MODEL
‘REPLACABLE COGS’
STATIC MODEL
‘Replaceable Cogs’
DYNAMIC MODEL
4-4-2
5-4-1
4-4-2

DEFEND
ATTACK

DYNAMIC MODEL
THANK YOU!