the EURO 2020 Players Impact Ranking - Procedure
the KA the Kick Algorithms тм
kickalgor.com
June 11, 2021

## A. Table of points - summary

| Title | Points | unit | Position | ETC | PPST |
| :---: | :---: | :---: | :---: | :---: | :---: |
| squad | 0,1 |  | All |  |  |
| pitch | 0,9 |  | All |  |  |
| captain | 0,25 |  | All |  |  |
| time | 0,1 | 1 min | outfield | $\checkmark$ |  |
| time | 0,0889 | 1 min | GK | $\checkmark$ |  |
| goal | 3 |  | All |  |  |
| penalty goal | 2 |  | All |  |  |
| penalty goal 2nd attempt | 1,5 |  | All |  |  |
| penalty goal - PSo | 0,5 |  | All |  |  |
| assist | 1,5 |  | All |  |  |
| indirect assist | 1 |  | All |  |  |
| on target | 0,1 |  | All | $\checkmark$ |  |
| passes completed | 0,01 |  | GK/DF/FW | $\checkmark$ |  |
| passes completed | 0,02 |  | MF | $\checkmark$ |  |
| fouls suffered | 0,001 |  | All | $\checkmark$ |  |
| red card | -3 |  | All |  |  |
| yellow card | -2 |  | All |  |  |
| negative assist | -0,5 |  | All |  |  |
| own goal | -3 |  | All |  |  |
| missing penalty | -3 |  | All |  |  |
| fouls committed | -0,001 |  | All | $\checkmark$ |  |
| win | 3 |  | All |  | $\checkmark$ |
| win ET | 2 |  | All |  | $\checkmark$ |
| win PSo | 1,5 |  | All |  | $\checkmark$ |
| draw | 1 |  | All |  | $\checkmark$ |
| loss PSO | 0,75 |  | All |  | $\checkmark$ |
| loss ET | 0,5 |  | All |  | $\checkmark$ |
| clean sheet | 1,1 |  | GK | $\checkmark$ * | $\checkmark$ |
| clean sheet | 2,1 |  | DF | $\checkmark$ * | $\checkmark$ |


| Title | Points | unit | Position | ETC | PPST |
| :---: | :---: | :---: | :---: | :---: | :---: |
| clean time | 0,01 | 1 min | GK/DF | $\checkmark$ |  |
| conceded goal | -1,5 |  | DF |  |  |
| conceded goal | -0,95 |  | GK |  |  |
| conceded penalty | -1 |  | DF |  |  |
| conceded penalty | -0,63 |  | GK |  |  |
| penalty save | 3 |  | GK |  |  |
| ```penalty save - 1st attempt``` | 1,5 |  | GK |  |  |
| PSO save | 2 |  | GK |  |  |
| save | 0,25 |  | GK | $\checkmark$ |  |
| possession (positive) | 0,05 | percentage point over 50\% | MF |  | $\checkmark$ |
| possession <br> (negative) | -0,05 | percentage point under 50\% | MF |  | $\checkmark$ |
| clean sheet (negative) | $-0,5 p t$ |  | FW | V* | $\checkmark$ |

## B. Points for a match

## I GENERAL POINTS

## Participation

in the squad of 23
$\mathbf{0 , 1}$ pt
on the pitch
$0,9 \mathrm{pt}$
team captain in the starting lineup
0,25 pt
time played
$1 \mathbf{m i n}=\mathbf{0 , 1} \mathbf{~ p t}$ (outfield players)
$1 \mathbf{m i n}=\mathbf{0 , 0 8 8 9} \mathbf{~ p t}$ (goalkeeper)
the points for time in the knock-out phase when the ET is run is multiplied by the ET Coefficient (ETC)

ETC = 85,72 \%
notes:

- the pitch time is different between time of entering to the field and the time of getting out; seconds are omitted
- the enter time on the start of: a match, the 2nd half, the 1st half of the ET and the 2nd half of the ET is respectively $=0,45,90$ and 105
- the get out time at the end of: the 1st half, the 2nd half, the 1st half of the ET and the 2nd half of the ET is respectively $=45,90,105$ and 120
- when a player is on the pitch only during the additional time his time score is 1 min
- a minimal time score is 1 min
- the score for time of outfield players shall not exceed 9 pt
- the score for time of goalkeepers shall not exceed 8 pt
- the ETC shall apply also for other scores; specific type of scores is marked by the addition of „[ETC]"


## Individual achievements

goal
3 pt
penalty goal (incl. the 2nd attempt by other player than penalty executor)
2 pt
penalty goal by the 2nd attempt (N/A the 2nd attempt by other player than penalty executor)

## $1,5 \mathrm{pt}$

penalty goal in the PSO

## $0,5 \mathrm{pt}$

assist
$1,5 \mathrm{pt}$
indirect assist
1 pt
attempt on target (incl. woodwork) [ETC]

1 shot $=\mathbf{0 , 1} \mathbf{~ p t}$
passes completed [ETC]
1 pass $=\mathbf{0 , 0 1} \mathrm{pt}$
fouls suffered [ETC]
1 foul $=\mathbf{0 , 0 0 1} \mathrm{pt}$
note: the definition of assist is broad; includes not only a direct last pass to the shooter, but also a pass that had a significant impact on the scoring of a goal, if there was a ball touch between that pass and the shot at goal, by an opposing player as of a accidental rebound or an attempt to clear the ball
indirect assist means: suffering a foul, which gives direct free kick, converted to a goal or gives a penalty kick (N/A when the same player is the executor of the kick)
indirect assist deals with also assist to the "own goal" of the opposite team (when a player shots into a goal, and a ball rebounds from defending player, and then the "own goal" is identified)

## Individual offenses

red card
$-3 \mathrm{pt}$

## yellow card

-2 pt (N/A for the first \& second yellow when the red is assigned)
negative assist
$-0,5 \mathrm{pt}(\mathrm{N} / \mathrm{A}$ when the yellow/red card is received)
own goal
$-3 \mathrm{pt}$
missing a penalty kick
-3 pt (N/A when the player doesn't shoot directly the penalty but scores a goal by 2 nd attempt, and then he is assigned $+1,5 \mathrm{pt}$ for a goal)
fouls committed [ETC]
1 foul $=-0,001 \mathrm{pt}$
note: the negative assist is when:

- there is not assigned the assist to the player from the scoring team and the last pass to the scorer was from the player of the team which conceded a goal; that could be also not only mistakenly pass, but also a random hit, a block a shot or attempt to clear the ball
- negative assist is also when an offense of a player has resulted in a penalty shot as well as a free kick, if this free kick has been converted into goal, by a direct shot


## Team achievement

> win

3 pt
win after the ET
2 pt
win after the PSO

1,5 pt
draw

1 pt
loss after the PSO
0,75 pt
loss after the ET
0,5 pt
note: a player is assigned points as a product of the team points multiplied by the player pitch share time (PPST); the PPST is shall be the result of dividing the player pitch time by the value of 90 , as of percentage number, rounded to two decimal places; in case of the ET the player pitch time is divided by the value of 105 , but the final result of the PPST can not being larger then $100 \%$

## II SPECIAL POINTS

## Defense performance (goalkeeper \& defenders)

clean sheet [ETC]

```
2,1 pt DF
1,1 pt GK
goal clean time [ETC]
1 min of „goal clean time" = 0,01 pt
minutes of goal clean =
conceded goal (N/A a penalty)
-1,5 pt DF
-0,95 pt GK
conceded goal by a penalty (incl. the 2nd attempt)
-1 pt DF
-0,63 pt GK
```

notes:

- the point score for the clean sheet is multiplied by the PPST
- in case of the ET the point score for the clean sheet is assigned also for clean sheet in the standard time ( 90 min .) in the amount of 2,1 or $1,1 \times$ ETC $\times$ PPST ( $\mathrm{N} / \mathrm{A}$ when the clean sheet occurs in a whole match)
- in case of the ET the point score for the goal clean time is multiplied by the ETC; the score shall not exceed 0,9 pt
- the points score for conceded goals shall apply to goals lost during the player was on the pitch; when the penalty shot is executed a player is assigned by a "conceded goal", when he was on the pitch while a faul was occurring
- the points score for conceded goals do not apply to the PSO


## Defense performance (goalkeeper)

penalty save
3 pt
save of the 1st attempt penalty but the 2nd attempt conceded

## $1,5 \mathrm{pt}$

PSO save
2 pt
save (N/A penalty kick) [ETC]
0,25 pt

## Ball controlling performance (midfielders)

possession (positive)
1 percentage point of the team ball possession over $50 \%=\mathbf{0 , 0 5} \mathbf{~ p t}$
possession (negative)
1 percentage point of the team ball possession under $50 \%=\mathbf{- 0 , 0 5} \mathbf{~ p t}$
notes:

- percentage numer of the team ball possession shall be rounded to integer
- the point score is multiplied by the PPST
passes completed (add-on for midfielder) [ETC]
1 pass $=\mathbf{0 , 0 1}$ pt


## Attacking performance (forwards)

clean sheet: if a forward doesn't score a goal or doesn't have an assist

$$
\text { clean sheet forward score }=\frac{-0,5 \mathrm{pt}}{\text { numbers of attempts on target }+1}
$$

notes:

- if the first goal or assist scored by the player happens in the ET (provided that he played at least one full half of the standard time) points for negative attacking performance are also assigned
- the point score is multiplied by the PPST (not limited PPST to 100\%)
- when the ET is run, the ETC is applied to the number on target using in the divisor/ denominator of the formula


## Position/Sources:

* players positions and all figures are assigned according to the information given on the official website of the EURO 2020 (N/A assist \& some of the penalty issues)
* outfield player taking over a position of goalkeeper during a match is recognized as a goalkeeper within the scope time o being a goalkeeper; he obtains points which are designated to goalkeeper position as well as to outfield position, but they are
separately calculated, he doesn't receive any points for conceded goals during his goalkeeper time; in terms of points awarded irrespective of the position taken - the points are calculated in total


## C. Points for the tournament

Points assigned to the player are calculated according to the following formula:
tournament player pts $=A V_{7}+A V_{M}$

## where:

$\mathbf{A} \mathbf{V}_{\mathbf{7}}$ - an average value of all scores, when dividend/numerator is a sum of all scores, and a divisor/denominator is always 7 (maximum number of matches for a team on EURO 2020)
$\mathbf{A} \mathbf{V}_{\mathbf{M}}$ - an average value of all scores, when dividend/numerator is a sum of all scores, however the best score is counted twice, and a divisor/denominator is equal to number of matches played by the team enlarged by 1 (one); however, this value may not be less than the median of the set of all scores (population of all scores) for the player assigned for each match played by his team

The final points score for the tournament is rounded to three decimal places. Negative values are acceptable.

## D. Additional explanations

## the 2nd attempt of the penalty

the $2 n d$ attempt of the penalty is recognized as a part of the penalty; it occurs when the player shots a ball toward to the goal, directly after bouncing the ball by the goalkeeper or directly after hitting the ball against the post / bar (woodwork), in response of the first hit in the penalty; „directly" means also touching a ball after accidental rebound by the other player

## scoring goal from the penalty

if after hitting a ball toward to the goal, the ball directly goes into the goal or indirectly goes into the goal after touching a goalkeeper, post or bar; in a case of the 2nd attempts, the penalty is recognized as successful also when a ball is rebounded of opposite team player, but not in a case when the own goal is identified;
save the penalty
it occurs when the penalty has not been scored and a ball directly after shot:

- touches the goalkeeper or
- touches bar/post and then touch the goalkeeper or
- after the 2nd attempt a ball touches the goalkeeper or touches bar/post and then touch the goalkeeper (incl. accidental rebound of opposite team player)
more the one player involved in the penalty kick
according to the football rules executor doesn't have to kick a ball directly to the goal, but can pass a ball to other player from the team; if a player from opposite team does not take
over the ball, the series of passes among players from one team, starting from first pass and finishing a shot on goal, will be recognized as entire one proces of penalty kick; the last player, who touch a ball and then scores a goal is assigned by points for the goal from the penalty, but the players who touched a ball before are assigned by the points for assist (with an exclusion this player who scores, if he touched also ball before); the penalty is recognized as the one process when is rebound by the opposite team player, but not in a case when the own goal is identified; in a case when the penalty is not converted to a goal, all players involved in the penalty proces receive negative points for the missing the penalty


## differentiation of places in the ranking

players are set according to the tournament scores in descending order; if two or more players are take the same point range, following criteria are applied with the aim of set them in different spots:

- the higher position of the club in the KA Football Club Global Rating (recently published on the 1st quarter of 2021)
- the higher position of the league (division) in the KA Football Leagues Global Rating (recently published on the 1st quarter of 2021)
- younger age (set in days)
- the higher position of the club in the KA Football Club Continental Ranking (recently published on the 1st quarter of 2021)
- higher position of the club on the league table at the day of starting the tournament
- higher position of the national team in the last CFRI Ranking
- more cups in the national team

