## The preferential voting system

## Simple for the voter - complicated counting process. Electronic voting and counting system.

Preferential voting is easy for the person voting. The person lists all the candidates he or she wishes to vote for in order of preference (numbered ranking). The counting system, however, is relatively complicated and entails transferring votes.
OsloMet uses a computer system for counting votes developed by Uninett. UiO has used the system for many years and it takes legal requirements for gender composition etc. into account.
The votes that are transferred are:

- surplus votes for candidates who receive more votes than are necessary to be elected
- votes for candidates who receive too few votes to be elected

Transferring the votes means that they are not wasted. It is not therefore futile to vote for a candidate who is likely to receive much more votes than he or she needs, since the surplus will be transferred to the next candidate. Nor is it futile to vote for a candidate who is likely to be eliminated, since the vote will be transferred to the next candidate when it has been determined that he or she cannot be elected.
This transfer also means that those elected have a proportionate amount of support.

## How to vote

Votes are cast digitally. You must firstly remove the candidates you do not want to vote for. The remaining candidates, as many or as few as you wish, are then ranked in order of preference. You write 1 for the candidate you most prefer, 2 for the candidate you would prefer if the first candidate is eliminated, and so on.
Example: Candidates A, B, C, D and E have been nominated for election. You do not want to vote for $C$ and $E$, so you cross these out. Of the remaining candidates, $A, B$ and $D$, you prefer $B$. Of the two other candidates, you prefer $A$ above $D$. Your votes will then be $2-A, 1-B$ and $3-D$, while $C$ and $E$ are not prioritised.

The procedure will be explained on the digital voting slip.

## Counting

The following gives a simplified version of the counting process.
All numbers are rounded up to two decimal numbers.
Any blank votes are removed first.
If a number of voting groups are included in the election, the voting slips are weighted so that the sum of the votes for members of the group's electoral roll is the group's influence.
The quota is reached by taking the sum of the votes' weighting and dividing this by the number of places plus one (two if one person is to be elected, three if two are to be elected etc.) The quota is the total weighting of votes a candidate must receive to be elected.
The voting slips are then counted so that the vote is given to the candidate given first place on the slip. If a candidate reaches the quota, he or she is elected. The least popular candidate is eliminated and their votes are transferred to the next candidate on the list.

When someone is elected, votes can be transferred to the next person on the voting slips. This is done by calculating the surplus, which is the candidate's weighting of votes minus the quota. The voting slips are transferred with an overall weighting equal to this surplus.

## Sources

https://en.wikipedia.org/wiki/Single transferable vote

