WHAT IS CLAIMED IS:

1. A method of operating a cell-based mobility production system for producing various types of mobilities, the method comprising:

assigning works required in each cell of a plurality of cells connected in series or in parallel that vehicle bodies need to go through based on the type of the mobility to be produced;

determining a feeding order of the vehicle bodies based on the assigned works; and

reassigning the works required in each cell that the vehicle bodies to be fed need to go through based on the determined feeding order; and

wherein each of assigning the works, determining the feeding order, and reassigning the works is performed by a processor; wherein the reassigning the works comprises adjusting working times of the respective cells such that idle time between the cells is minimized, the idle time being caused by differences in working times between different mobility models according to the determined feeding order.

2. The method of claim 1, further comprising assembling the various types of mobilities by performing the reassigned work on the vehicle bodies fed into each cell.

3. The method of claim 1 or 2, wherein reassigning the works required in each cell comprises reassigning the works such that a total production time of the vehicle bodies to be fed according to the determined feeding order satisfies a minimum production time.

4. The method of any one of claims 1 to 3, further comprising:

after reassigning the works, detecting a work delay in a specific cell when the vehicle bodies are fed based on the determined feeding order; and

reassigning the works again in response to detecting the work delay.

5. The method of any one of the preceding claims, wherein reassigning the works comprises:

preparing a plurality of expected reassignments in which the works required in each cell for the vehicle bodies to be fed based on the determined feeding order are assigned; and

selecting an optimal reassignment from among the plurality of expected reassignments, wherein a total production time of the vehicle bodies to be fed based on the determined feeding order satisfies a minimum production time in the optimal reassignment.

6. The method of any one of the preceding claims, wherein determining the feeding order of the vehicle bodies comprises:

preparing a plurality of expected production plans different from each other in the feeding order of the vehicle bodies; and

selecting an optimal expected production plan from among the plurality of expected production plans that has a shortest total working time.

7. The method of any one of claims 1 to 5, wherein determining the feeding order of the vehicle bodies comprises:

preparing a plurality of expected production plans different from each other in the feeding order of the vehicle bodies; and

selecting an optimal expected production plan from among the plurality of expected production plans that has a shortest standby time.

8. The method of any one of the preceding claims, wherein reassigning the works comprises reassigning the works required in each cell for the vehicle bodies to be fed based on the determined feeding order and workload differences between a preceding vehicle body and a following vehicle body of the vehicle bodies.

9. The method of any one of claims 1 to 7, wherein reassigning the works comprises reassigning the works required in each cell for the vehicle bodies to be fed based on the determined feeding order and possible and impossible works in the respective cells.

10. The method of any one of the preceding claims, further comprising planning a logistics flow required in each cell based on the feeding order and the reassigned works.

11. A method of operating a cell-based mobility production system for producing various types of mobilities, the method comprising:

assigning works required in each cell of a plurality of cells connected in series or in parallel that vehicle bodies need to go through based on the type of the mobility to be produced;

determining a feeding order of the vehicle bodies based on the assigned works;

reassigning the works required in each cell that the vehicle bodies to be fed need to go through based on the determined feeding order; and

assembling the various types of mobilities by performing the reassigned work on the vehicle bodies fed into each cell; wherein the reassigning the works comprises adjusting working times of the respective cells such that idle time between the cells is minimized, the idle time being caused by differences in working times between different mobility models according to the determined feeding order.

12. The method of claim 11, further comprising planning a logistics flow required in each cell based on the feeding order and the reassigned works.

13. The method of claim 12, further comprising:

after planning the logistics flow, detecting an occurrence or non-occurrence of a logistics flow issue during feeding of the vehicle bodies based on the feeding order; and

performing planning the logistics flow again in response to detecting the occurrence of the logistics flow issue.

14. The method of claim 13, wherein the logistics flow issue comprises a collision or congestion in the logistics flow.

15. The method of claim 12, further comprising:

after planning the logistics flow, detecting a work delay in a specific cell when the vehicle bodies are fed based on the feeding order; and

in response to detecting the work delay, performing reassigning the works and planning the logistics flow again.

16. The method of claim 12, further comprising, after planning the logistics flow, detecting possibility or impossibility of achieving a target production amount of each mobility when the vehicle bodies are fed based on the feeding order.

17. The method of claim 16, wherein detecting the possibility or impossibility comprises detecting the impossibility of achieving the target production amount, the method further comprising reassigning the works and planning the logistics flow again in response to detecting the impossibility of achieving the target production amount.

18. The method of claim 16, wherein detecting the possibility or impossibility comprises detecting the possibility of achieving the target production amount, the method further comprising fixing and applying a smart factory operation plan in response to detecting the possibility of achieving the target production amount.

19. A cell-based mobility production system for producing various types of mobilities, the system comprising:

a plurality of cells connected in series or in parallel, wherein the cells are configured to

receive vehicle bodies and modify the vehicle bodies based on the type of the mobility to be produced; and

a processor configured to:

assign works required in each cell of the plurality of cells based on the type of the mobility to be produced;

determine a feeding order of the vehicle bodies to be fed based on the assigned works; and

reassign the works required in each cell based on the determined feeding order by adjusting working times of the respective cells such that idle time between the cells is minimized, the idle time being caused by differences in working times between different mobility models according to the determined feeding order.

20. The system of claim 19, wherein the processor is configured to reassign the works such that a total production time of the vehicle bodies to be fed based on the determined feeding order satisfies a minimum production time.