



## Work Continues

### A User Interface and Finalizing Features

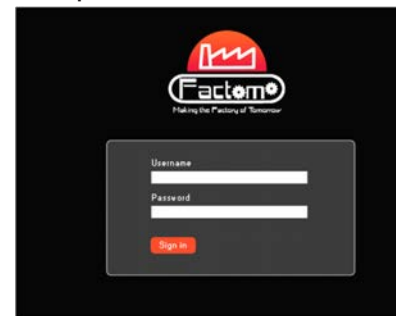
This week was heavily focused on the User Interface development. As seen in the following included document, we have been able to design something that is user-friendly, yet complex enough to display the game features we are working on, as well as allow for expandability in the future. We were able to present this to our client's who were very pleased by it. This coming Friday, once the UI is implemented in the game environment, we plan to have a playtest to determine any tweaks that may need to be made.

On the programming side, the game is now able to load and reuse layouts from previous players for use in a current session. This required a change in database layout, affecting other scripts and functions, which have since been updated. Finally, our statistics and ranking mechanism has been put into place with an algorithm calculating production cost, throughput, and time. With all of this complete, most database functionality has also been finished, with remaining features existing in and affecting only the game itself.

Aesthetically, our operator characters are completely polished and animated and we are awaiting final textures from our artist early next week. On the audio side, a final soundtrack has been compiled and most atmospheric sounds will be ready to load into the game environment shortly. UI sounds and feedback will also be developed as the system is implemented.

### Moving Forward

As we rapidly move toward the end of the semester, we have completed our list of deliverable features for the client and ourselves and have a clear path and timeline to get there. Over the next few weeks, we will be concluding development and beginning the archival process. Additionally, we will be prepping our 3 minute and 30 second videos as well as our final presentation. We also plan to have numerous playtests during this time, which we will use to polish our project as well as provide a roadmap for future work with this client.



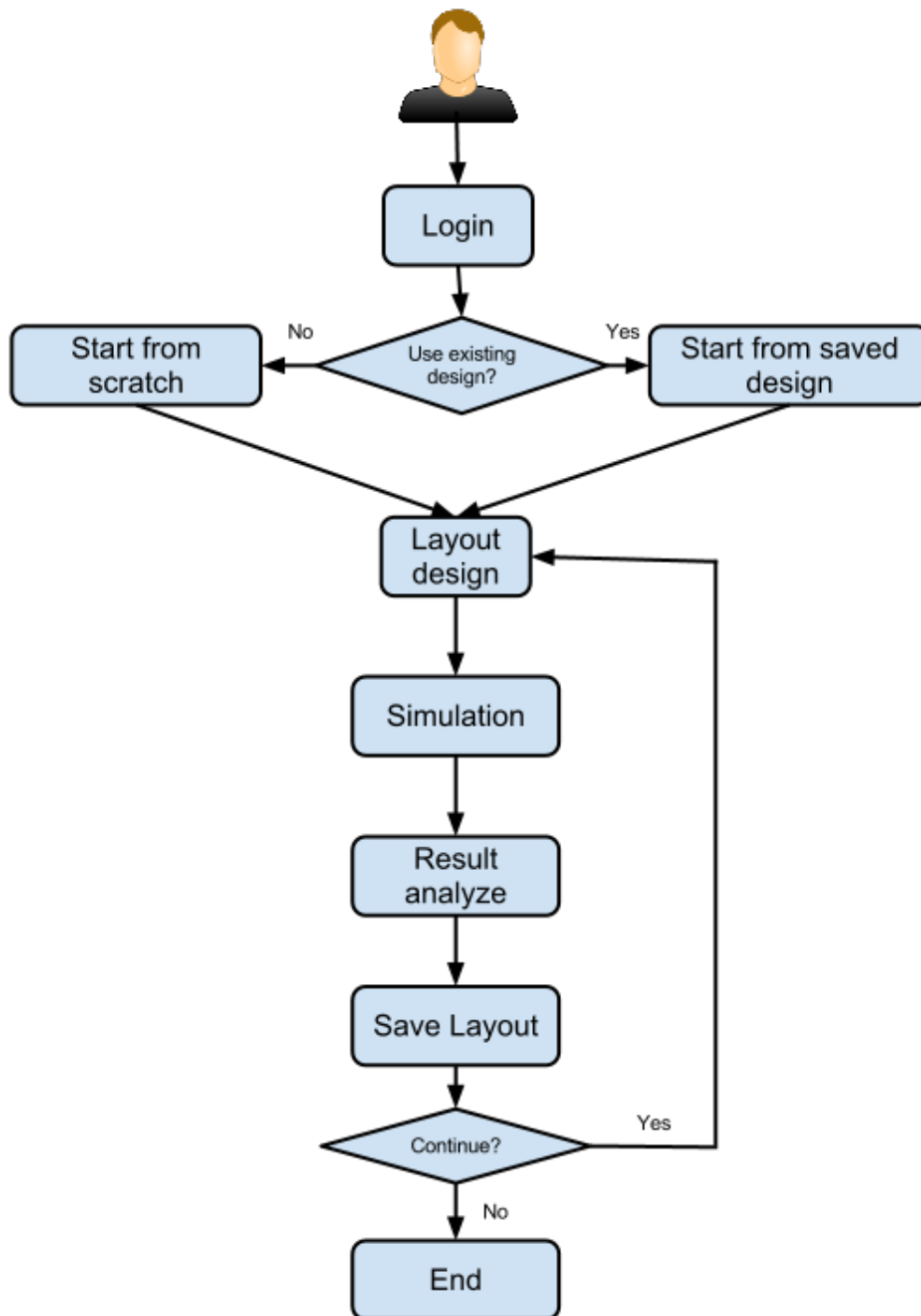
<http://www.etc.cmu.edu/projects/factomo/>

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# Factomo product description

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## Login System

Players need to have an account to play our game.

When they launch the game, the login page will show up.

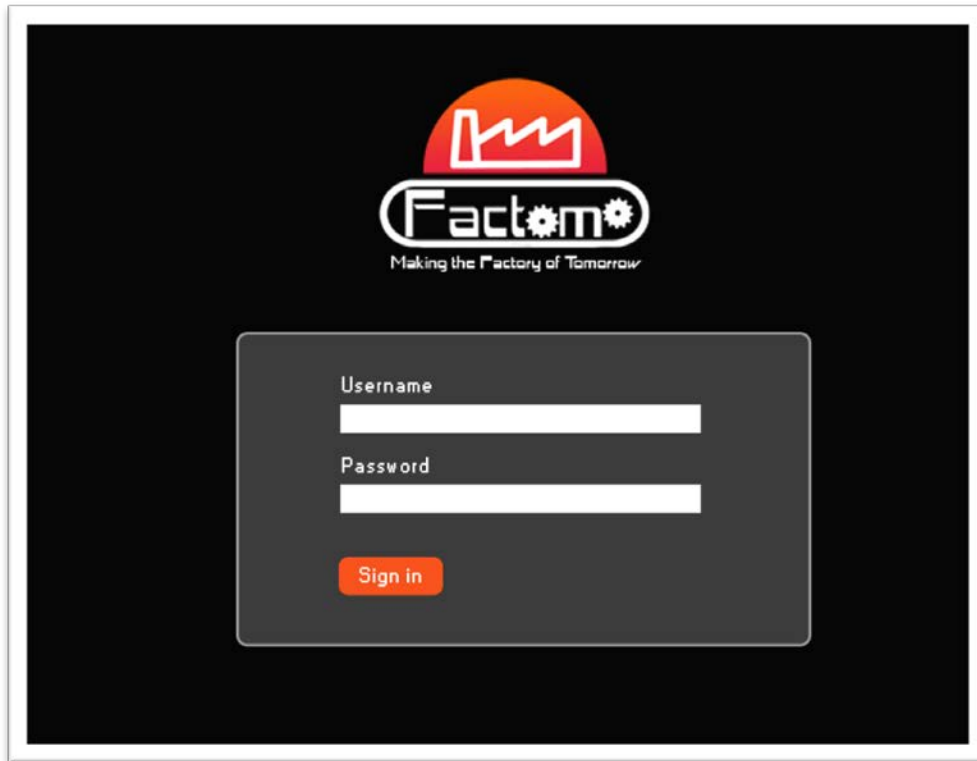


Figure 1 Login page

After having verified the username and the password, the player will be able to see the welcome page. The welcome page consists of three parts: profile, high score and tutorial. Player can switch them by clicking on the buttons in the top-right corner of the screen.

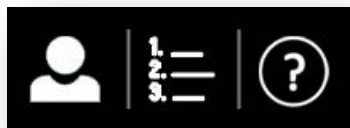


Figure 2 Buttons for switch among different pages

## Welcome page




Figure 3 Profile

In the profile page, the designs that saved by the players will show up. Players can select one of them, and then click on the **Load** button which is in the bottom-right corner to continue working on his previous design. By clicking on the **Delete** button, player can also delete this design.

Of course, player has the choice of restarting a new design from scratch by clicking on the **Get Started** button that is in the bottom-left corner.



Figure 4 High score

The high score page will provide the information of the best layout design in the server. Players are allowed to help modifying this design by clicking on  Load button in the corner. If the design of the player is more efficient than the previous best design, it will take its place and become the number one.

The tutorial page will provide players different video tutorials to help them to understand the mechanics of the game.

## Layout design

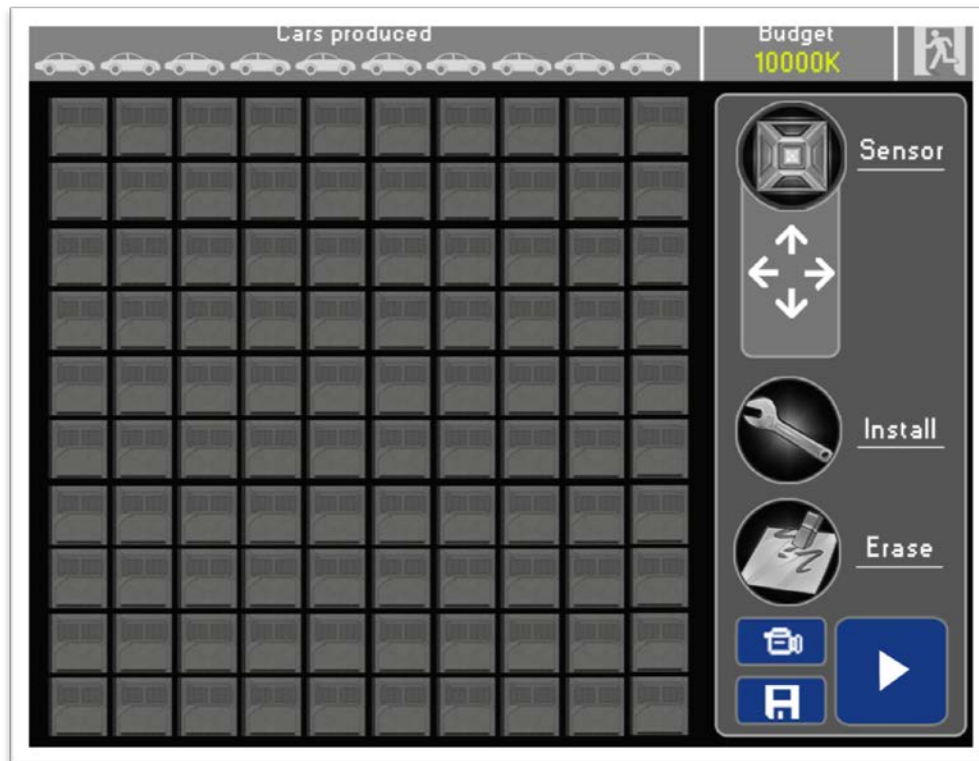


Figure 5 Layout design initial page

The layout design page consists of three parts: top bar, tool box and layout.



Figure 6 Top bar

The top bar consists of produced cars number, the budget and quit button.

In term of the produced cars number, it shows how many cars you have been produced during the simulation. Once produced ten cars, the simulation ends and the system will give you the score. The score will be based on the information collected by the simulation and calculate the income of a month's working time.

If starting from scratch, the players will receive 10000K dollars as the starting budget.

The quit button allows players to end the modification without saving the configuration.

There are three layout tool buttons, three function buttons and four direction buttons.

Layout tool buttons:



Sensor buttons allows you to place sensors in the layout. However, before using them, player needs to choose their directions first.



Clicking on one of the directions, the arrow will change the color. We provide three different colors that represent different priorities. For the use of the alternative path, players are allowed to choose more than one directions.



Having finished setting sensors, players now are able to place machines and operators to install automobile parts. By clicking on the install button, an installation order menu will pop up.

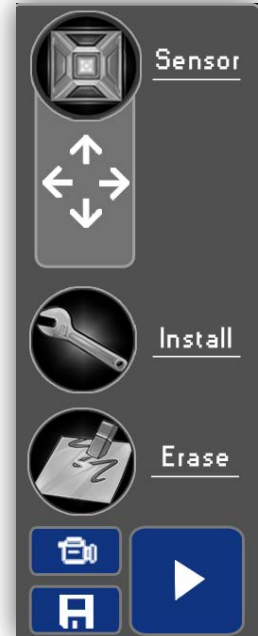


Figure 7 Tool box

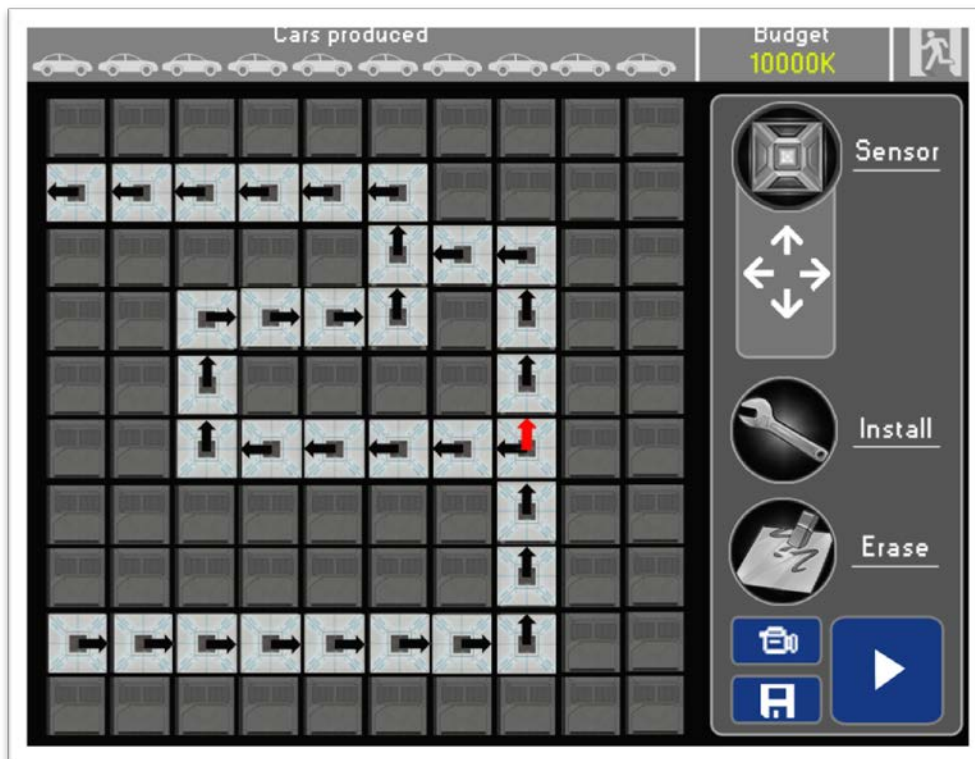


Figure 8 Set sensors

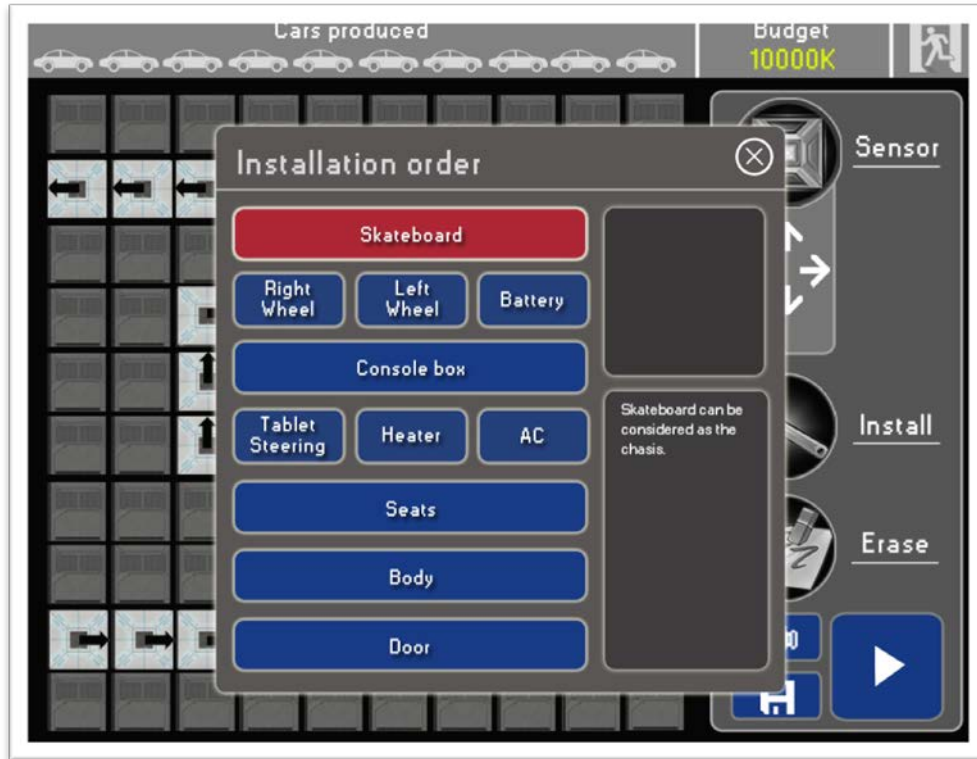


Figure 9 Installation order



Figure 10 Installation order chart

The installation order chart shows the precedence of the parts that players need to follow. For example, the battery cannot be put on the carrier before the skateboard is on. But the both wheels and the battery can change their order to put on the carrier.

The windows on the top right is assigned to show a descriptive video of the selected part and the one on the bottom right is assigned to show the word description.





Figure 11 Choose machine

After selected the part to install, another window will pop up to let player choose the type of the machine. The system will also show the price of the machine and the cost per second when using it.

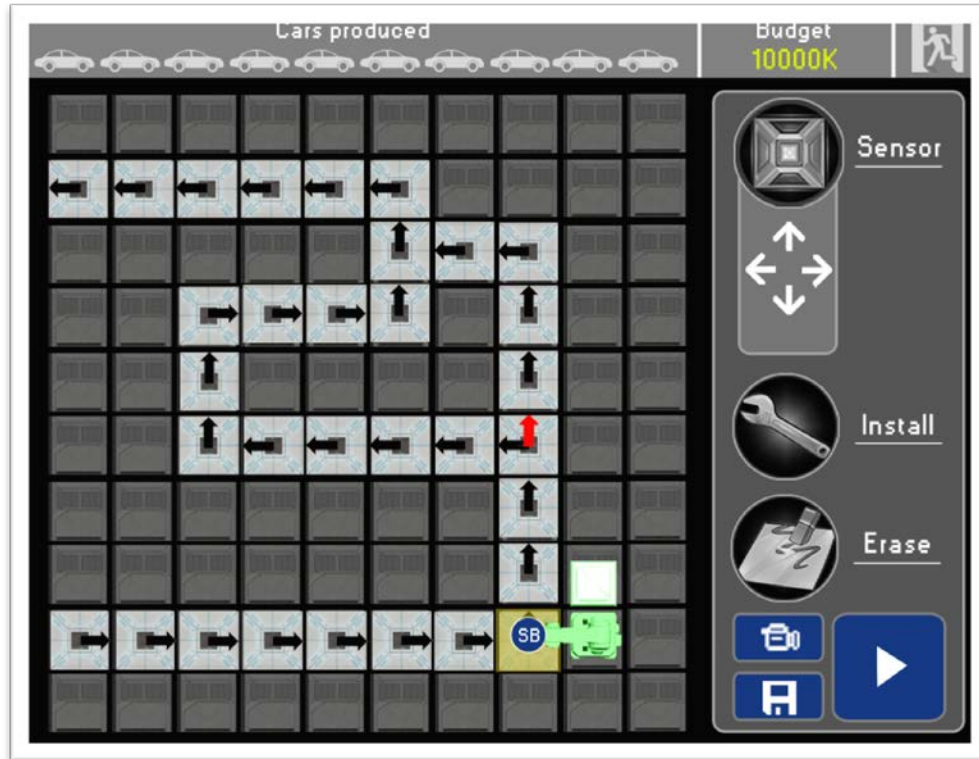


Figure 12 Place machine

Now, the players can start placing the machine in the layout. By right clicking the mouse, the machine will rotate 90 degrees. To succeed in placing a machine, player needs to aim the yellow part to the sensor and prevent the machine from touching any other material.

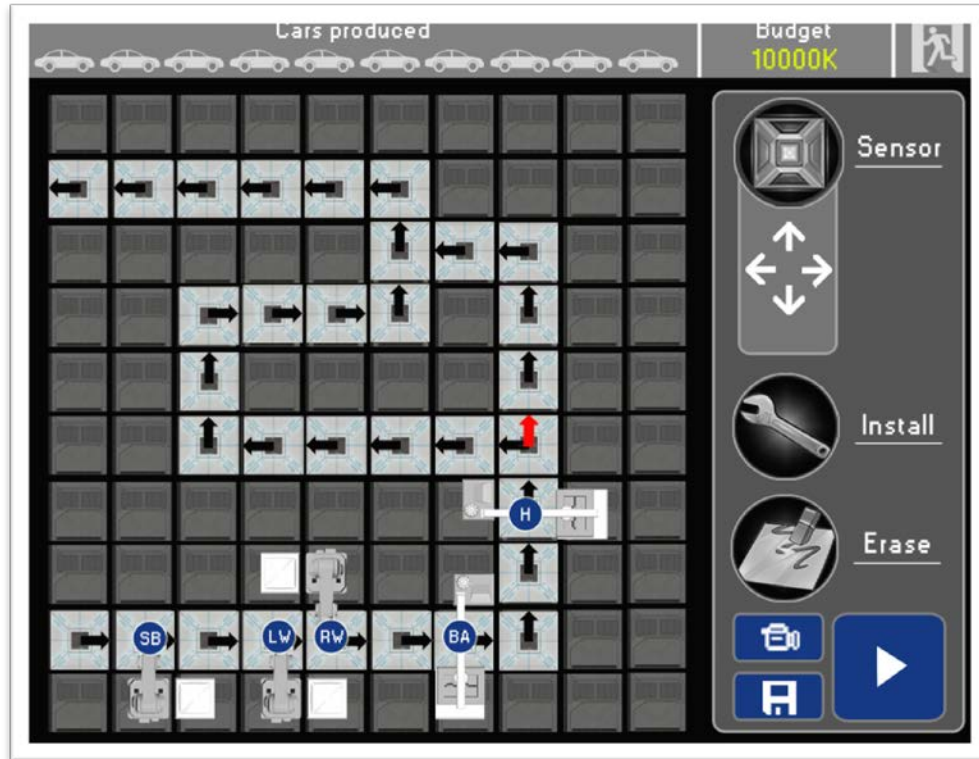





Figure 13 after placing machines

After placing all the machines, if player clicks on the  button, the simulation will start. If clicked on the  button, the game will switch to the first person view. Player is now allowed to walk around and look at the layout in detail. The simulation will end after producing ten cars.

At the end, if clicked on the  button, the player can save his design to the database.

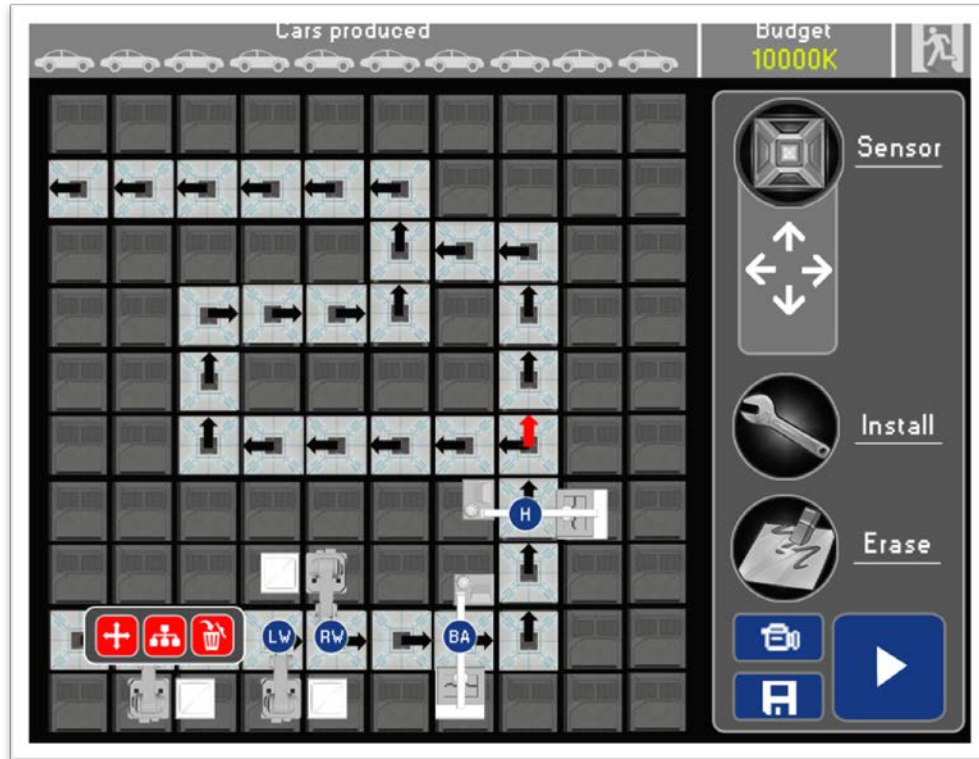





Figure 14 Modifying layout

If player wants to modify the layout, he can click on one of the elements, for example, the machines. A series of buttons will pop up and let player make different actions.

If clicked on the  button, player can move the machine.

If clicked on the  button, player can modify the part it takes charge of.

If clicked on the  button, player can delete this machine from the layout.