

The MIMIC Construction Logistics Game



1. The MIMIC CLS Game



Figure 1 Early game prototype under testing.

The MIMIC CLS game depicts an abstract, generic construction area where multiple companies construct several different properties. At game start no common solutions are in place and limited routes are prone to congestion, causing fatal delays in the delivery of materials. 2-4 players take on the roles of builders, attempting to deliver materials to the construction sites while preserving their bottom line. Each builder also receives a hidden agenda, or “direction” for their company. One player takes the role as the city, looking to minimize disturbance to the environment, enacting ordinances and suggesting common logistical solutions.

The game runs over six turns, and each turn begins with a random event, showcasing some of the more common happenstance occurrences at construction projects, often encouraging preparedness and changing the conditions of the turn.

Next, the players have the opportunity to suggest 1-3 logistical solutions, after which the builders secretly bid their level of commitment to each solution - if the combined bids reach a stated threshold the solution goes into effect, if not, the CLS is delayed to the point of uselessness and discarded. The city ends its turn by choosing whether to issue a new ordinance, potentially impacting the builders for the rest of the game.

The builders then have three minutes to plan their delivery routes, without conferring. When they are done, or the time runs out, they place trucks on routes according to their plan. If a stretch has more trucks than its congestion limit, there is congestion, and deliveries are delayed. Provided there is an intact route, builders then deliver materials to their building sites, finishing building stages if they have enough.

Each turn ends with cleanup (players take their trucks back) and every second turn scoring of points for finished construction stages. At the end of the sixth turn scoring, players tally up their points to see who the better builder is, while the city is evaluated on the basis of total disturbance caused by the construction.



Figure 2 Ongoing experienced player testing at game convention

Given that testing is so important in game design, this project has included as much testing as resources (primarily time and access) has allowed, and many lessons have been learned during the project. The main takeaway has been on designing a traditional board game for non-gamers, the problems that crop up and how to tweak the design accordingly. There have been five types of testing throughout the design process:

Personal testing: The most common form of test was run by the designer himself, playing the game solo with a single person taking all the roles, usually to test basic mechanics. Given the “prisoner’s dilemma” style of many of this game’s mechanics, this type of testing gave very little data beyond the immediate operation of the mechanics.

In-house testing: tests conducted with fellow researchers of the project. This allowed us to try viability of mechanics that require several players to function as intended and required to see if the gameplay seemed to spark conversations on the subject matter.

External testing was conducted with people connected to project partners, in order to elicit feedback on the game and gameplay as a whole. This is also where some of the main findings started to appear regarding play with and design for inexperienced players.

Experienced players testing was made to contrast with the inexperienced groups and because their experience makes them invaluable when it comes to spotting faults and “exploits” in the game, easily overlooked by designers. Even if they are not representative of the target group, their feedback is vital for quality assurance. The main problem of this type of testing is that it is resource-intensive.

Target group testing is the most important and the most difficult to arrange, and the development of the game could certainly have benefited from more of this. We have been fortunate to have been able to conduct testing with several target groups throughout the project, but were not able to collect test data in a systematic manner from all these groups.