Narrative

Germany is one of the most well-known chess countries; hosting many of the important tournaments dating back to the twentieth century. In Germany, chess is used in schools to instruct students the four C’s: Critical thinking, Creativity, Collaboration, and Communication. These skills are especially important with the rise of the digital age. Many jobs are being eliminated leaving young adults with new opportunities to create jobs for themselves. Chess is such an effective learning tool because anybody can play. The chess community is inclusive to anyone, anywhere. Mannheim specifically is known as the “Chessboard City” because the layout of the streets creates a chessboard in the center of the city. This was one of the main inspirations for the macro-micro interpretation of the chessboard. The city grid acts as the largest scale. The two-hundred-foot squares of the cite are the next smallest. The chess boards within those squares are the next scale down and the pattern continues down to the seating and plant life.

Our design “Garden of Champions” aims to illuminate the chess culture of Germany and bring together members of the community. The plan of the site is an extension of the cities overlapping chessboard streets. Alternating squares contain either natural green elements or some sort of stone to create the illusion of a large-scale chessboard on the site. As people walk on to the site, they become pieces of the chess board. They are able to meander the site and play or view chess games. There will also be a variety of more vertical squares to add to the chessboard Russian doll effect. In green areas there will be topiary shaped in cubes and pawns. In stone areas might a be concrete plaza with some covered seating areas to play chess and collaborate. We decided to create five ‘life-sized’ chessboards, scaled differently to accommodate all ages and physical abilities. The largest will be in the center, the medium and small ones will Along the perimeters of the large two-hundred-foot squares of ground are checkered concrete walkways for people use to navigate the site. The chess pieces on the boards have solar panels on the tops of them connected to an LED lightbulb inside the pieces which illuminates them at night. Creating the idea that chess can be played anytime, anywhere, by anyone.

The largest chess board will be located more centrally for larger crowds to gather and watch the games. There will also be some tables on the sides of the board where people can play chess. The board itself will be sixty-four feet by sixty-four feet with chess pieces on wheels to be pushed around. The pieces may be too large for some people to push alone, which encourages people to collaborate and even play in teams. There are two medium sized boards and two small boards to give a variety of options for the life-size chess games.

We connected our design to five of the UN sustainable development goals: climate action, sustainable cities and communities, industry innovation and infrastructure, quality education, peace justice and strong institutions. The main focus of the project is the climate action, making clean energy collection beautiful. Which we did with the game of chess and it’s beautiful way of bringing people together. Sustainable cities and communities are made by beginning with projects like these. Once the community understands better how solar panels work, and how they can be used in creative designs, they will embrace the change. The goal for industry innovation and infrastructure is met by the exploration of new ways to incorporate solar panels into landscape design. Having the solar panels be in the board and powering the lights in the pieces makes it impossible for anyone to miss. It intrigues the mind and starts a conversation. It may even inspire new ideas for collecting solar energy. As mentioned earlier, chess can play a large role in the education system in Germany. Children are taught important life skills through the game. Lastly, the game of chess itself contributes to peace justice and strong institutions. This is one of the main reasons why chess was selected over other games/sports to be the focus of the landscape. It is a familiar game with an unfamiliar construction.

Environmental Impact

The world has been in a continuous downhill battle with climate change and the use of renewable energy has been the most effective way to help the earth and create clean energy. One of these renewable energy sources is solar energy which uses the UV or heat of the sun to create energy and reduce greenhouse gas emissions. In the U.S. alone we use 12.1 kWh of energy per person just to function in our day to day lives. The biggest issue we are facing today is how to reduce our negative impact on the earth by cutting down our carbon footprint. The sun produces about 288 kilowatts of energy and by harvesting a portion of this energy we can generate energy for homes, towns, cities, and more. By using renewable energies such as solar energy, we can reduce the negative impacts we have on the earth and create positive impacts on our climate.

Looking at our design of the chess board, our whole idea is that we used solar panels as the squares within the boards. We have black monocrystalline solar panels for the black squares on the board and white solar panels for the white squares on the board. We have solar panels sitting on a steel frame to hold it up and layered on top we have construction glass to set the chess pieces on. Each solar panel has its own individual steel frame and square of construction glass. This allows the community to be able to interact with the chess board while preserving the solar panels.