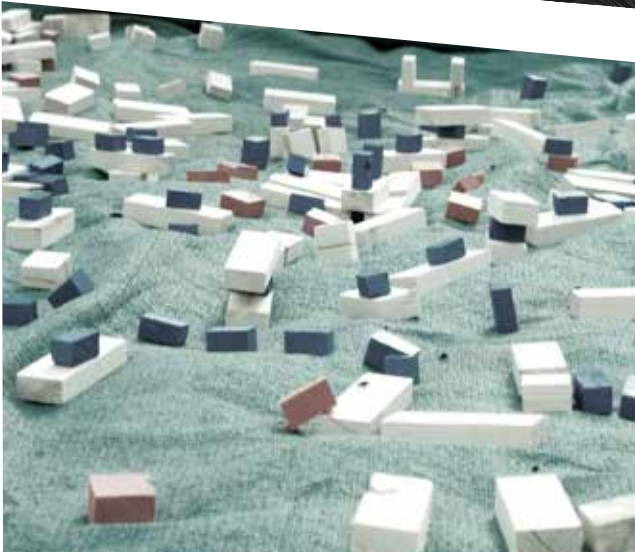


GAMES



"Games can be defined as experi(m)ent(i)al, rule-based, interactive environments, where players learn by taking actions and by experiencing their effects through feedback mechanisms that are deliberately built into & around the game. Gaming is based on the assumption that the individual & social learning that emerges in the game can be transferred to the world outside the game."

A definition from a 2009 article in Simulation & Gaming by Igor Mayer

Be it 'Go' with its deceptively simple rules governing smooth ovals across a chequered board or hopscotch that enlivens school yards and streets, games are integral to any community's cultural heritage. Game play involves and invokes memories of fun, friendship and sometimes failure too.

Strategising, winning, plotting or just pulling a slingshot to launch an angry bird at a doomed pig, what we do in a game comes naturally to us because games are a safe and comforting metaphor of life itself.

It was but natural that this immersive power of games was harnessed to serve a variety of objectives from war games to train soldiers to games to understand policy implications. Not only do games provide an inexpensive way of mimicking real life situations, they also allow us to experience the implications of our decisions, learn from those experiences and contemplate on possible futures.

David Kolb, and American educational theorist, popularised the idea of experiential learning. Kolb's model of experiential learning consisted of four elements: concrete experience, observation and reflection, the formation of abstract concepts and testing in new situations. This is a cyclic process where learning can begin at any one of the four stages.

Games have been widely used to understand "wicked problems", and to explore ways to tackle them. Planning and designing cities with all the stakeholders is one such problem; a simple turn based table-top game can help us design cities better. City Planning Games, first proposed by Dr. Juval Portugali in his book *Self-Organization and the City*, have been widely used as participatory tools for city planning.



The immersive power of games have been leveraged for training personnel. For example, we are developing a game for the Institute for Plasma Research, Gandhinagar to train their tokamak operators in using a robotic arm for remote operation of the tokamak.



Games provide a space to understand the implications our actions, which make them a powerful analysis tool for policies. Policy games can be used to interactively collect inputs from the citizenry. Budget games can be used as a medium to increase awareness about national budgets and the influence of subsidies over deficit. The Indian Energy Game, developed by researchers at Fields of View, is another such game where the participants get to design the energy mixture for the country by playing the roles of the different ministries responsible for energy policy in India.



Games provide a space for reflection, collaboration and learning. Our goal is to understand and explore different ways in which games can be used to enhance the following capabilities: decision making, learning and education and participatory processes, in the areas of urban systems.