With mines going deeper and shallow mineral resources being depleted, the challenges related to rock engineering have escalated over the years. Companies are not only operating mines that are safe but also more productive, environmentally and socially responsible, while still being economically successful. Considering this, the rock engineering fraternity has played a tremendous role from where we were 50 years ago to today and also looking forward for the future. This presentation will briefly cover the technologies in the past and then discuss current state of the art tools that are being used in the industry in the rock engineering domain. It will finally conclude with some ideas for the future that can be used for improving mine safety from a rock engineering perspective.