In two previous lectures, the Square Kilometer Array has been described from the receiver and data transmission point of view. In this final SKA presentation, I will concentrate on the processing required once the massive data stream from the SKA receivers has been transported to the Science Data processor. Using experience gained from several of the pathfinder and precursor instruments, we show some of the bottlenecks encountered, and how we avoid these in the SKA. We show the challenges we face in designing a very high performance, extremely scalable system, that is part of an operational instrument, and compare this to conventional high performance computing facilities.