Multifactor productivity measures are high in demand, but not easy to generate. The challenge that faces potential producers of productivity measures is that many series often exist within national statistical offices (NSOs) that can be used on an ad hoc basis to generate productivity estimates. In turn, NSOs are constrained in their data production and presentation by the framework of the European System of Accounts (ESA 95). Productivity measures are not an integral part of the ESA95. Moreover, the requirements for theoretically proper measures can be in conflict with ESA guidelines. In this paper we draw some lessons of the EUKLEMS-project concerning these issues. In this project, industry-level KLEMS-type productivity measures are constructed for 15 European countries on a consistent basis for the period 1970-2003. These measures are based on available statistical material from NSOs, but these sources needed various adaptations to arrive at comparable productivity measures across countries. This includes issues such as different price concepts of inter-industry flows, choice of aggregation indices, capital stock and service measures, and labour input measures. We compare productivity measures derived in a internationally consistent KLEMS-framework with productivity measures based on public national data. Finally, we indicate how productivity measures could be integrated in a new system of National Accounts.