Statistical agencies in Europe and the US face several constraints. On the one hand, there is the demand for high quality data. On the other hand, collecting these data has become more difficult. Response rates have been declining. Costs have been increasing, and budgets have been decreasing. As a result, statistical agencies are looking for design options that control costs and errors. This situation has led to a growing interest in adaptive survey designs. Various institutes like the US Census Bureau, Statistics Canada, RTI International, Statistics Sweden and Statistics Netherlands are using or considering adaptive survey designs for production. Adaptive survey designs are based on the rationale that any population is both heterogeneous in its response and answering behaviour to surveys and in its costs to be recruited and interviewed. Different survey design features may be effective for different members of the population.

The main components of adaptive survey designs are a set of candidate treatments, a stratification of the population into relevant subpopulations, a set of explicit quality and cost criteria that need to be optimized, and input parameters based on (historic) survey data that represent the effectiveness of the treatments for each of the subpopulations.

In this lecture, we will first discuss the kinds of adaptive survey designs that are distinguished, the circumstances under which these are deployed, and their implications.

Subsequently, the relevant steps in an Adaptive Survey design are discussed: the identification of design features that potentially affect survey errors and costs, the identification of indicators of quality and costs, the monitoring and analysis of process data and the decision rules that govern appropriate interventions. The largest part of the lecture is dedicated to a discussion and comparison of various fieldwork approaches, both in person and business surveys.