Organizations operating at high CMMI maturity levels use data in decision making processes. This data is collected in various activities such as project management, system and software development, integration and testing etc...

The talk will present, with examples, experience gained in such companies. It will cover the application of prediction and estimation models, baselining for setting specifications and targets, data mining for generating insights and triggering process improvement initiatives.

In particular some lessons learned and reflections on over 30 years of experience will be listed. As an add-on, potential risks and opportunities in the adoption and deployment of open source software will be discussed using tools and methods developed in the FP7 RISCOSS project (www.riscoss.eu).