Tutorial Summary

The Goal/Question/Metrics (GQM) Method in the Era of Data-driven Projects

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Software development projects, just like several other types of projects, are growingly becoming data-centric, or data-driven. In fact, the ever-growing availability of data provides opportunities to improve performances, to make better informed decisions, to monitor and control more effectively the ongoing activities, etc.

Nonetheless, software development remains a largely creative activity, where humans play a decisive role. Interesting data cannot be extracted from developers as it is done from machines and tools. Therefore, it is often the case that, given a business objective, the data needed to pursue that objective are not readily available; often it is not even known if the needed data are available or if they could possibly be obtained at reasonable costs.

In these situations, the "good old" GQM method can be extremely useful.

The tutorial shows how to start from a business objective and identify the data that are needed to pursue the objective. data selection and collection are also discussed. Finally, when the data are available, several instruments can be used to convert data into information, knowledge and ultimately into value. These instruments range from AI-based analysis to "plain" data visualization.

The course shows how the GQM fits into and enables data-centric software projects.