## Where manual pipetting and 4.0 lab automation are complementary

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Our laboratory world is in great mutation. Processes become more complex, equipments are connected, and the amount of collected data is booming. These changes are also to be seen in the specific field of precision liquid dosing, where from perfected mechanical handheld instruments, the trend goes to electronic and fully automated robotic systems. But changes are not taking place everywhere at the same rhythm, and capability to jump into new technologies shows significant variations.

The presentation reviews the different approaches to liquid handling and how they impact laboratory outputs. It details both advantages and limitations of a chosen way of doing. As a result, instead of exclusion, the complementary aspect of manual and automated instruments is outlined as how to maintain reliability, efficiency, and productivity in a laboratory.

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