# TM & MT – a happy couple
# …or how to calculate the potential benefit

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## Abstract

More and more customers with an established translation process are planning to use a machine translation (MT) system to derive further benefit from their extensive translation memory (TM) and validated terminology. Before potentially introducing an MT system, questions are raised regarding the added value and quality such a solution can deliver in a professional translation environment – combining a translation memory system (TMS) with an MT system. STAR has developed a **three-phase proof of concept** that can answer these questions. This service provides customers with conclusive statistics and a solid decision-making process that are based on "real-life" projects.

## 1 Phase 1: Engine training and initial analysis with real jobs

At the beginning of Phase 1, STAR sets up a machine translation (MT) system that trains MT engines using customer-specific translation memory (TM) and terminology only, thereby guaranteeing that translation results are consistent in terms of style and terminology.

STAR then does an initial analysis with real jobs from previous months that have been translated using a translation memory system (TMS), e.g. Transit, but without MT support. These jobs are translated again (except for 100% matches) using the trained MT engines. Then, each MT translation is compared with the existing human translation using Transit's fuzzy

algorithm. This way the MT results can be mapped into the fuzzy ranges. The resulting statistical overview gives the customer a precise impression of the following: 1) How many MT suggestions would the translators have been able to additionally benefit from – instead of having a lower quality fuzzy match or none at all? 2) Which language directions and domains are suitable for being processed with MT?

## 2 Phase 2: Pilot phase in the live process

Phase 2 shows how those involved in the process handle MT and TM in practice. To answer this question under real-life conditions, the trained MT engines are integrated into the customer's existing translation process. This is done by one-off adjustment of the TM project templates or the parameters of the corporate language management (CLM) system. The project management workflow remains the same: The MT suggestions are requested during project import and are sent to the translators included in the project packages.

Translators do not need to take any additional steps: Transit e.g. displays the MT suggestions in the translation editor along with the fuzzy matches, but without indicating a quality score.

## 3 Phase 3: Productive analysis of the results from the pilot phase

For the productive analysis, the translation jobs that were processed in the pilot phase are analysed in the same way as the jobs in the initial analysis. But now, this analysis determines how the translators have actively benefitted from the MT suggestions.

It shows at a glance if the expectations raised by the initial analysis have been met, as well as reliably indicating what needs to be adjusted and optimised before the MT solution goes live.