Data Analytics

Large Travel Conglomerate: Quality Mappings and Data Redunbancy

Background :

German IT Consultancy uses Dataction services to make quantum improvements in quality of Mappings and Data Redundancy.

Challenges

- The quality of Mappings and Data Redundancy was impacting the capability of downstream systems to share data and thereby utility of the master data system.

- It is necessary that accomodations from downstream local systems are mapped to the correct ones in master database to provide the bridge for data sharing.

- Because of this downstream systems had to face Data Inconsistency and Redundancy and One –Truth was required to communicate across systems.

- Client manages the accomodation master data platform for a global travel company.

- Fuzzy logic based algorithm automaticall maps the accomodation from downstream systems with the matching accomodation in the master database, then a new master database . In case no matching accomodation is available in master database , then a new master database entry is created from the downstream system accomodation.

- The purpose of this platform is to allow the various subsidiaries of the global travel company to exchange data such as travel reviews, photos, tips, weather, or to advertise on each other's website.

- The automated process had led creating Duplicates and also false Mappings were encountered (between accomodations from the downstream systems and the master database.)

Approach

- Use combination of automation and manual checks for given complexities.

- Use automation to identify cases with clear match and eliminate them for manual revirew.

- Setup right tools, templates and system UIs for all cases to be checked manually.

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- Design quality assurance plan, project plan and project governance model to allow milestone based review.

Solutions

- MS Access , VBA and Manual checks.

- Algorithm with optimized Quality Score setup specific to feed to suffice decisions for AutoMap.

- VBA script for MS Access database was designed to create suspect lists of such cases that need to be manually checked. UIs to validate and take appropriate action to resolve Fvalse Mappings and De–Duplicate individually.

- Excel based templates with specified actions to enable Bulk transactions.

Achievement

- Quantum improvement in data quality improving user confidence regarding the master data system.

- 220K+ accomodations in master database and 1.5 million accomodations from downstream systems were present in the incumbent system.

- Dataction team implemented automation to reduce this number by about 35% thereby saving costs for the client and crashing the project timelines.

- About 180K+ cases were checked by Dataction team leading to identification and correction of about 20 K false mappings and about 45K duplicate items.

- Additional 1 million + data points (such as reviews , photos, tips etc) could now be exchanged between downstream systems as a result of this exercise.