

Data Science

Global postal automation system vendor, Europe

Stakeholders: Head of Postal Automation Technology & Chief Product Architect

Goal

- ◆ Development of a report specification and design tool for a software product line for postal automation systems, with a focus on real-time statistics gathered by the equipment in mail sorting centres.

Results

The solution developed by S23M Managing Partners Andrew Shewring & Jorn Bettin eliminated all repetitive patterns in report specifications, and captured the full range of variability across the set of all reports in the form of modular visual models in the customer's preferred terminology. Specially developed visual model editors enabled implementation consultants with no background in software engineering to specify and validate report specifications.

- ◆ Report definitions are smaller by a factor of six. Productivity improved by a factor of two to three (10-40 person days per implementation project). Medium and long-term quality gains from shifting to model based specifications are estimated to be even larger
- ◆ Systematic model reuse across projects. The consistency of derived configuration artefacts is guaranteed at all times. New/inexperienced staff can easily implement change requests relating to statistical reports, and related HTML documentation is always kept up-to-date via a fully automated process.
- ◆ Changes in the underlying implementation technology have no impact on extant report specifications, significantly simplifying future technology upgrades.



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Collaboration for life

Data Science

Cross-disciplinary collaboration

Information visualisation, visual language engineering, user interface development, multi-lingual support, language integration.

Business intelligence & organisational learning

Dashboard design, dimensional modeling, ETL (extract, transform, and load) design, statistical analysis, data warehouse implementation.

Machine learning

Data analysis, A.I. (Artificial Intelligence) system design, model selection, model validation, regularisation, error analysis. Design, implementation, and training of neural networks.

Methodological support

Model Oriented Domain Analysis, Model Oriented Domain Engineering, System of Profound Knowledge, Just-In-Time manufacturing, Kanban, and agile project management.



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