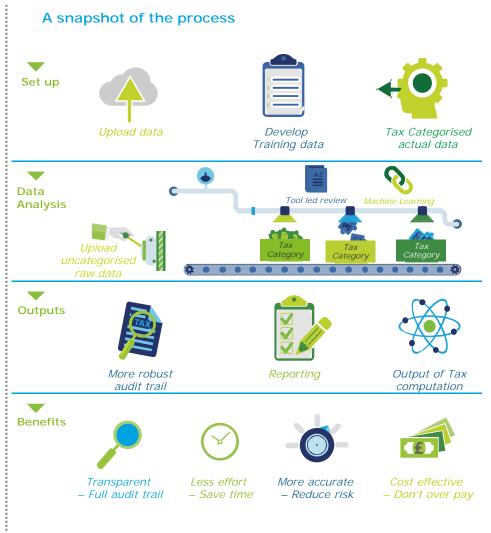# Deloitte.

PSA Wizard
A better way to PSA

Deloitte's PSA Wizard – Machine Learning

By introducing Machine Learning techniques into its data classification process, the Deloitte PSA Wizard's journey to automate complex decisions has taken a step further. The new development will further support organisations enhance their PSA delivery model, by helping to efficiently identify which data may be taxable and non-taxable.

Deloitte PSA Wizard is a market leading technology solution which automates the data classification process, driving the review of significant volumes of data which would be time consuming and, in some cases, prohibitive using a line by line or traditional excel based classification process.

How does the PSA Wizard's Machine Learning work?

- By using a configurable supervised Machine Learning method, the PSA Wizard studies tax categorised data ('training data') and learns tax rules and patterns which have influenced the classification.

- Non categorised ('raw data') data such as expense reports and ledger data are then uploaded to the Tool and the PSA Wizard's chosen Machine Learning model classifies the new data.

- The Machine Learning model is 're-trained' over time to take into account important changes, such as to the structure of the raw data itself and, other important developments such as new tax rules.

- For current Users of PSA Wizard, the Tool will be able to use actual data already categorised in the system as 'training data'.

- For new Users of PSA Wizard, the Tool can take a proportion of current, or, prior year tax categorised data which can be used to 'train' the model. The model is then applied to the remaining data to automate classification. Deloitte can support new Users with identifying a robust 'training data' set.

A snapshot of the process

Set up
Upload data
Develop Training data
Tax Categorised actual data

Data Analysis
Upload uncategorised raw data
Tool led review
Machine Learning
Tax Category
Tax Category
Tax Category

Outputs
More robust audit trail
Reporting
Output of Tax computation

Benefits
Transparent – Full audit trail
Less effort – Save time
More accurate – Reduce risk
Cost effective – Don't over pay

What has changed?

- The PSA Wizard uses a 'rules based' approach driven by word search matching and a ranking engine to classify data, which provides a tried and tested way to categorise your data clearly and efficiently.

- The Machine Learning model has been integrated with the rules engine to learn from the multiple data fields (expense type, vendor, location, amount etc.) present in the data which has already been categorised – either by rules and overrides in the system or by loading the prior year categorisation.

- The new Machine Learning approach reduces the time and complexity to create the rules in order to automate the data classification; in concert with the existing rules-based approach it adds a powerful review overlay.

- Machine Learning magnifies the many existing benefits (see below) of using the PSA Wizard over an excel based

Who would benefit from using PSA Wizard?

Organisations who use up valuable time and money by performing line by line reviews of large volumes of data, or, those that that take reasonable positions on data which has already been categorised, but either potentially overstate amounts or creating compliance risk. There are many benefits:

Saves time and money

By automating repetitive and time consuming PSA processes, it allows your professionals to step away from significant manual analysis of large volumes of data and provides the opportunity to work on more value enhancing activities.

Reduces risk

Quickly and more reliably analysing and categorising uploaded data sets helps mitigate risks caused by human error, giving greater confidence in the annual PSA computation.

Improves quality

By documenting the decisions made and positions taken, and providing the tools to review important judgments and identify valuable tax exemptions and relief opportunities.

Provides management reporting

By creating management reporting providing a more robust audit trail to support Senior Accounting Officer (SAO) obligations.

Provides complete analysis

Instead of a sampling approach, the Machine Learning methodology analyses multiple data fields within categorised data enabling significant volumes of data to be accurately categorised.

Flexible data interface

A highly customisable interface for importing data combined with easily configurable reports allows the PSA Wizard to fit neatly into any tax system landscape.

One unique platform with multiple solutions

PSA Wizard uses a unique Deloitte tax technology platform, so the same benefits can be extended to VAT, Corporate Tax, R&D or tax depreciation processes through our suite of applications.

Find out more?

For more details on how the PSA Wizard can help transform your PSA process, or to request a demo contact:

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