ErbRechner

LexisNexis Austria wished to develop an inheritance calculator which could reliably solve complicated inheritance entitlements under Austrian law.

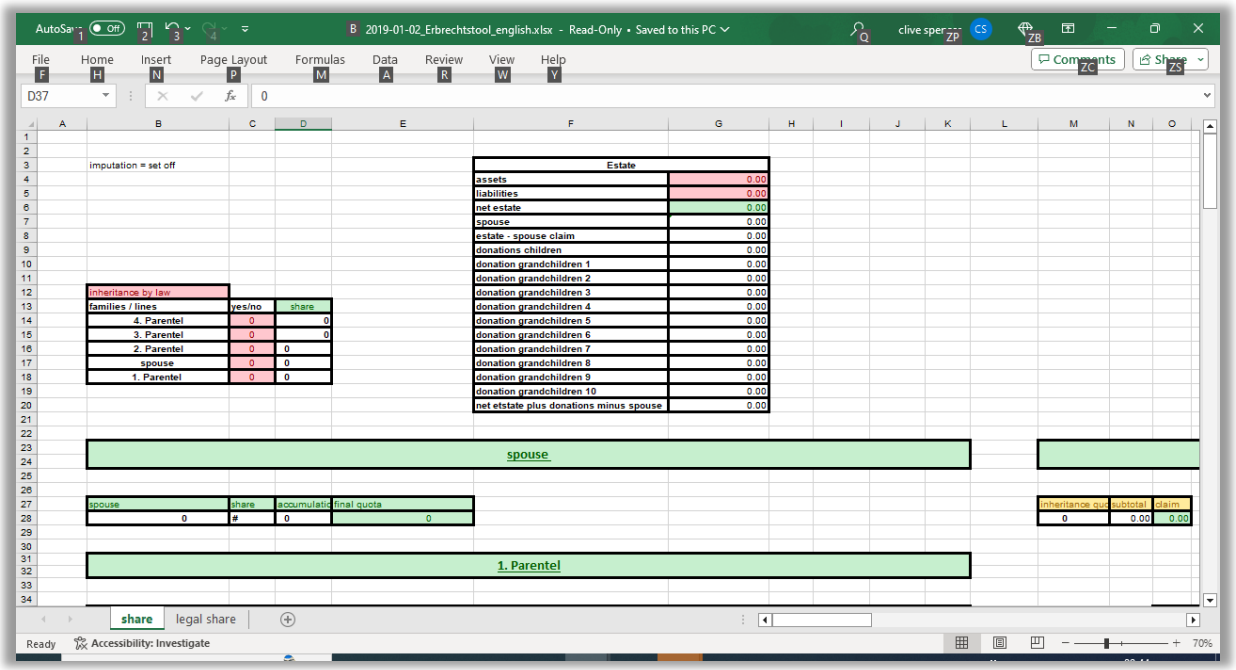
In 2019, LexisNexis Austria approached LPA about developing the back-end rule-based logic for such a tool. LexisNexis Austria already had a working model in Excel but it was complex and hard to understand. LPA's challenge was to build a logic based calculator which could run on the server and work in conjunction with a web-based front end.

LPA built a prototype in 10 days to prove that their approach was viable and then spent several weeks refining and testing the calculations and extending the calculator to handle some of the more obscure cases. This engine ran on the server as a Restful service.

LexisNexis commissioned a contractor to develop an attractive front end for the web deployment. Together they designed a suitable JSON structure to communicate the data between the front-end UI and the back-end calculator.

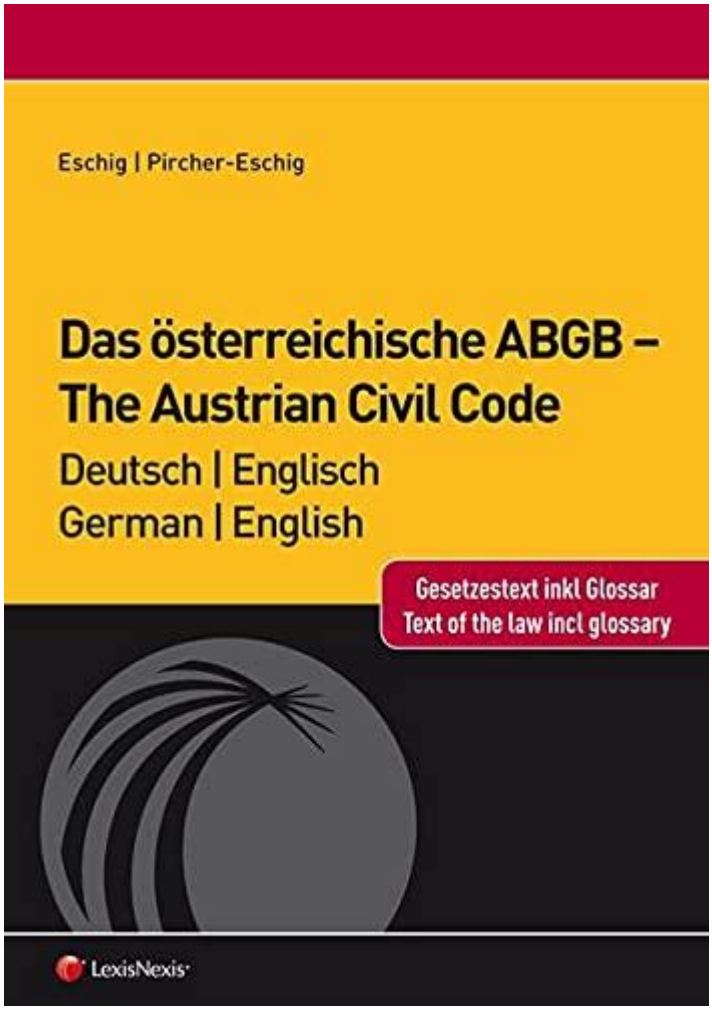
ErbRechner was developed in under 10 weeks and made available on the LexisNexis website for over 4 years.

Dr.Matthias Brand, a leading expert in the logic of inheritance law, provided an Excel spreadsheet which calculated all inherited and compulsory parts due to entitled family members (quotas and amount).



This served as a functional specification for LPA.

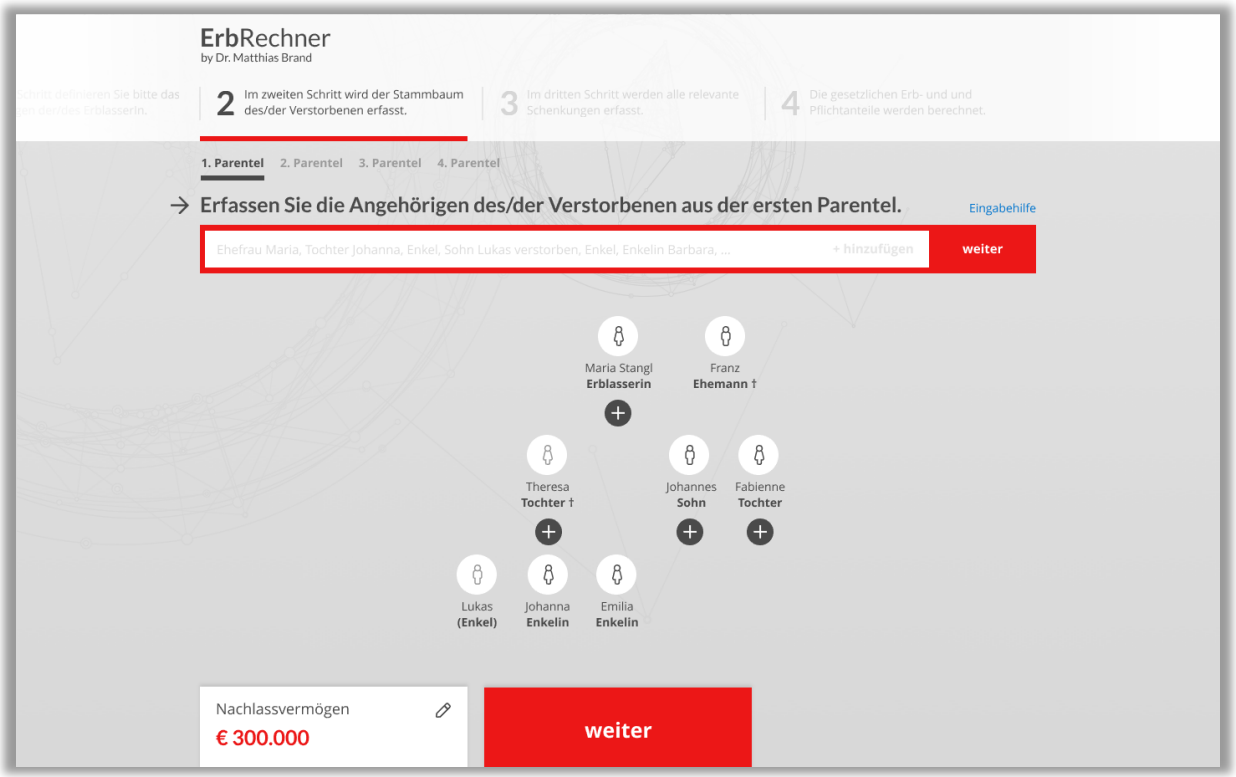
In addition, the Austrian Civil Code was available in German and English as published by LexisNexis to act as a definite resource.



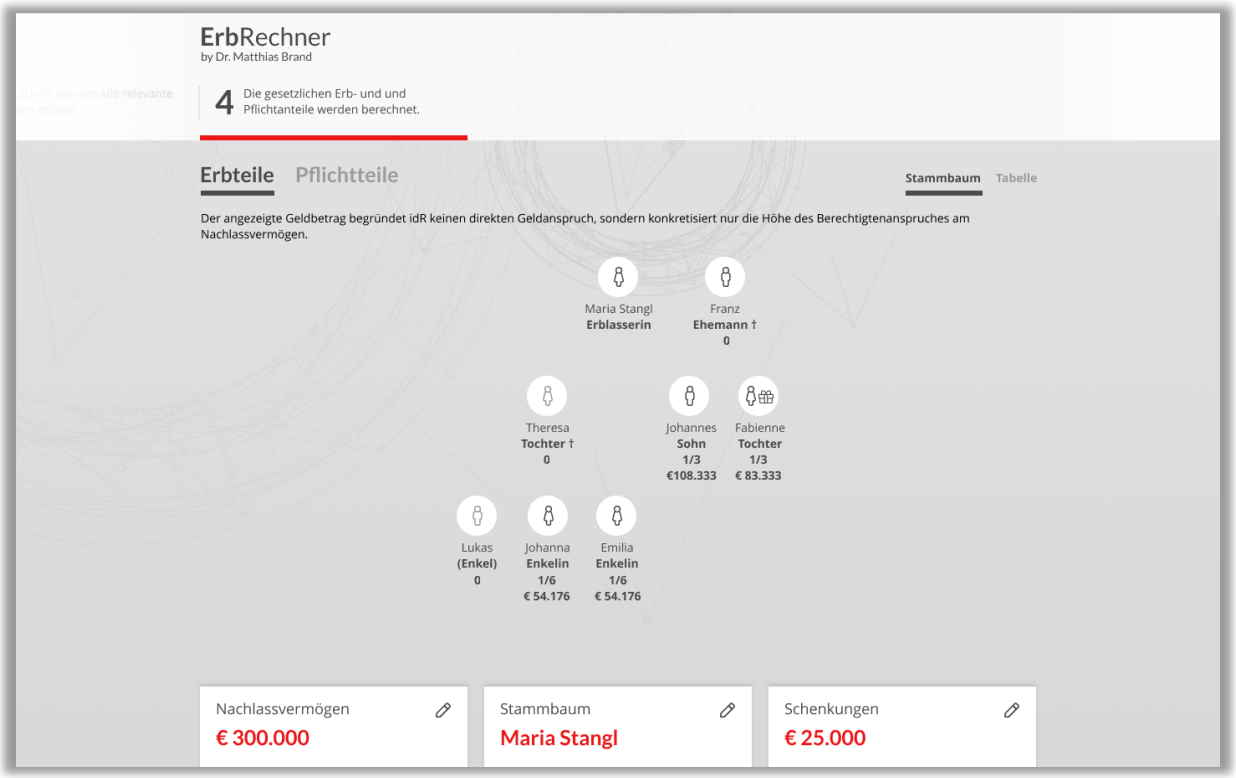
The calculations were often complicated, as the number of family members entitled to a portion theoretically was very large. It could include the spouse, parents and children as well as any number of siblings, grand-children, great grandchildren, nephews and nieces.

In the case where entitled inheritors had pre-deceased the deceased, then that could trigger another layer or two of exploration and calculation.

In the first step, the inheritance is recorded in the front end and split into assets and liabilities. These can be further defined into subcategories, such as cash, real estate or loans, tax debts, etc.



In the second step, the testator's family tree is recorded up to the fourth parentel using an innovative text input. Compared to a classic structure, text entry has the advantage that the family tree can be built much more quickly. The classic structure of attaching nodes using the plus symbols was also supported.



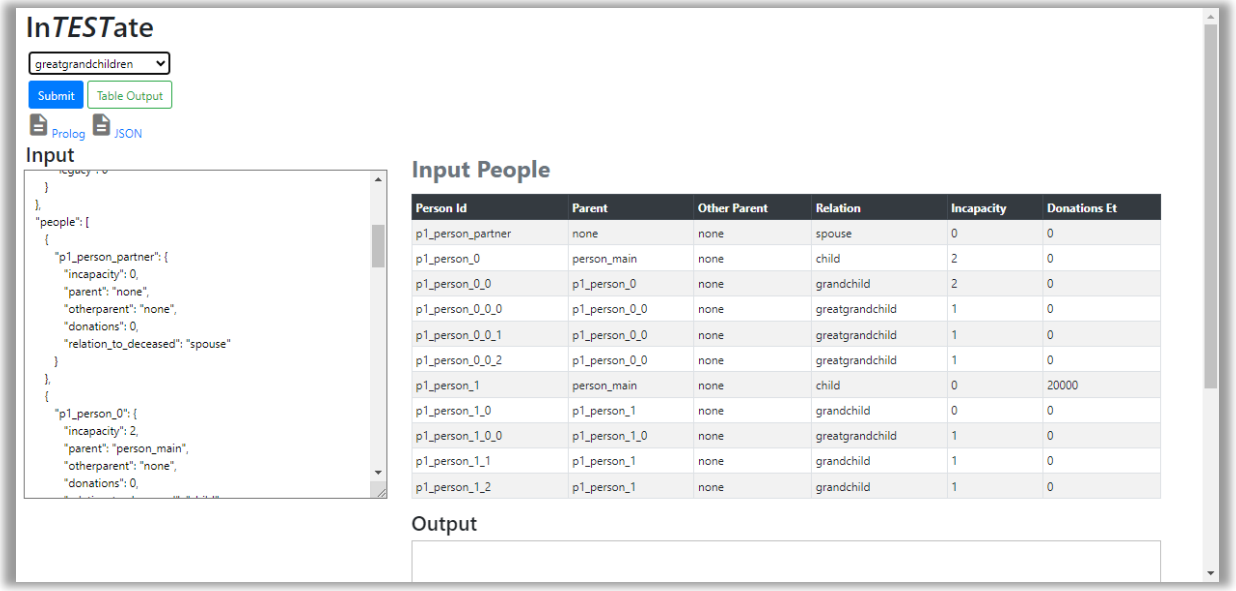
In the third step, gifts to the heirs are recorded again in the front end as these can potentially affect entitlements.

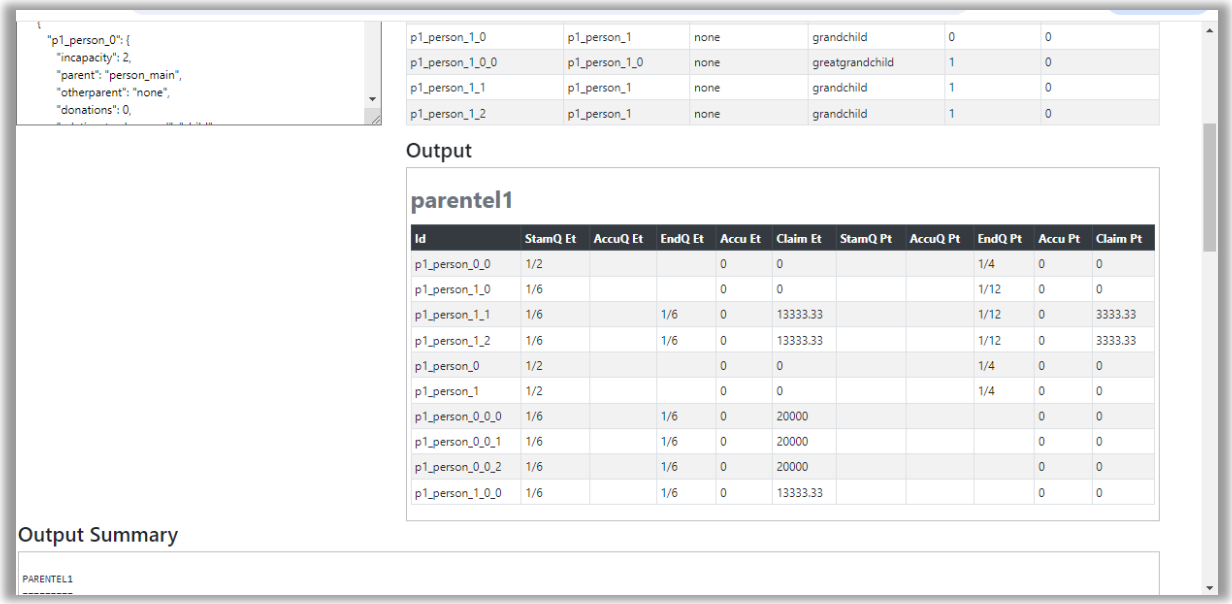
In the fourth step all the recorded data is passed to the backend calculations developed by LPA.

The calculator was packaged up as a RESTful service which could be deployed either as a hosted service or installed on-prem inside the firewall.

The JSON representation was able to represent all the family members with slots for their gifts and entitlements.

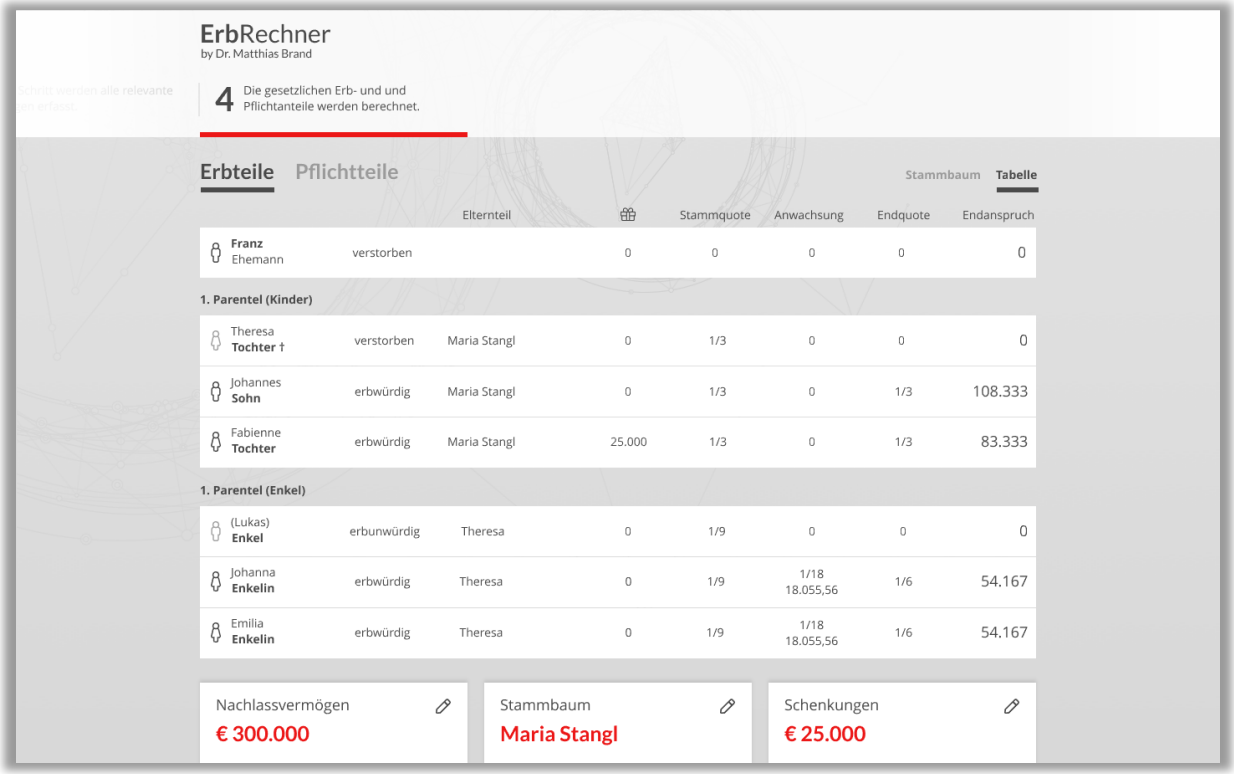
To help develop and test the JSON, a test page was established with numerous test cases:





The back-end Prolog-based inheritance engine calculates the “family tree including inheritance rates and amounts” and returns the results to be displayed graphically.

The front end makes the advice and entitlements clear, so the future testator can see at a glance how his or her assets will be divided.




Lexis360® Erbrechtstool
von Dr. Matthias Brand
2 Im zweiten Schritt wird der Stammbaum der/des Erblasser/in erfasst.
Erfassen Sie die Angehörigen der/des Erblasser/in aus der ersten Parentel.
Eingabehilfe
Sohn Johannes, Tochter Fabienne + hinzufügen
weiter
Franz Ehemann †
Maria Stangl Erblasserin
Theresa Tochter †
Lukas (Enkel)
Johanna Enkelin
Emilia Enkelin
Nachlassvermögen
Lexis360® Erbrechtstool
von Dr. Matthias Brand
4 Die gesetzlichen Erb- und und Pflichtanteile werden berechnet.
Tabelle
Erbteil
Pflichtteil
Erbquote
Erbanspruch
Franz Ehemann
1. Parentel (Kinder)
Theresa Tochter †
Johannes Sohn
Fabienne Tochter
25.000
1. Parentel (Enkel)
(Lukas) Enkel
Johanna Enkelin
54.167
Emilia Enkelin
Daten editieren