

# Knowledge Transfer Partnership Case Study

flexys 

This partnership received financial support from the Knowledge Transfer Partnerships (KTP) programme.

KTP aims to help businesses to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK knowledge base. This successful Knowledge Transfer Partnership project, funded by UK Research and Innovation through Innovate UK, is part of the government's Industrial Strategy.

## About Flexys Solutions

Flexys provides innovative debt management software for companies who offer credit, e.g. financial services and utilities providers. It is based in Bristol and was formed in 2016 by a team of experienced debt management solution specialists looking to dramatically improve on the status quo in the industry.

## The challenge the KTP set out to address

There is a need from utility companies and finance providers to obtain sophisticated insights into their customer's individual needs and also to predict when early intervention may be beneficial. The objective of the project was to integrate Artificial Intelligence (AI) and Machine Learning (ML) technology within Flexys' software, to enable more effective management of debt resolution and improvement of customer relationships and retention. The ability to more accurately collect relevant data, predict trends and customer behaviours will provide much better tools for the management of repayment plans, thus leading to a high percentage of debt resolution, but also to an improvement in long term customer retention.

UWE Bristol is one of the UK's leaders in ML/AI. Working in partnership ensured that an appropriate solution was developed that is practical and effective but cognisant of acceptable practices and regulatory boundaries. Currently this technology is not used commercially in this particular industry; the KTP model offered the opportunity to accelerate its integration into Flexys' systems, enabling systems to reach the market sooner.



KTP Case Study - Flexys Solutions



The Flexys platform

## The solution

Solving this challenge involved creating an innovative machine learning solution, in a collaborative effort drawing upon the expertise from UWE Bristol and domain knowledge from Flexys. Gaining in depth knowledge of the available data was key, along with finding a creative way of using machine learning to extract the information and predictions that were needed.

## What changed as a result of the KTP? Impact and Benefits:

Flexys:

Flexys have benefitted from the expertise provided by the KTP to develop their AI/ML solution. Knowledge and skills have been transferred to Flexys' R&D team to continue developing and maintaining the product.

The Knowledge Base:

Dr Mehmet Aydin is Senior Lecturer in Computer Science and has long-standing experience in solving real-world problems using AI, machine learning and soft computing methods. Dr Jim Smith is a Professor of Artificial Intelligence and Deputy Director of UWE Bristol's Computer Science Research Centre. His interests include computational intelligence, machine learning, and interactions between humans and intelligent systems.



KTP associate Hannah winning a Sparkie award

The KTP resulted in new research opportunities for the Knowledge Base, including a paper which has been submitted to one of the top journals in AI. It has deepened their experience and understanding of commercial applications of machine learning within the financial technology industry, guiding direction for future research efforts.

### The Associate

Hannah Dockings holds a BSc Mathematics from the University of Exeter. Machine learning is her primary interest, sitting at the intersection of maths, statistics and computer science. From working with UWE Bristol, Hannah has developed the confidence and ability for both herself and the company to continue researching new AI/ML methods in future. At the same time, she has gained industry and project management experience that would have been hard to get so early in her career without the KTP scheme.


### The Results

Flexys expect this work to develop into a significant revenue stream for the company. It has had a significant impact on Flexys' sales and marketing effort by establishing them as an innovative and forward-thinking company above competitors.

### What the partners have to say:

"The KTP work Hannah and the team have done has been of great value to Flexys enabling us to position ourselves as innovators in the field of Debt Management technology. This is especially impressive given the corporate giants we compete against. In addition, it has significantly contributed to the sales and marketing effort. We're proud of the head start we have made in data, analytics and machine learning and we see this developing into a significant revenue stream for the company in the form of DSaaS – Data Science as a Service"

Jon Hickman, CEO  
Flexys Solutions Ltd



"This project has facilitated a very productive process to implement the recent research results and find out the strengths and weaknesses. It was a privilege to work with Flexys and the associate in this project. On the basis of the results produced by the associate, a fresher idea has emerged to model very dynamic customer behaviours and adapt to seasonal changes."

Dr Mehmet Aydin,  
Senior Lecturer in Computer Science  
UWE Bristol