Identifying and understanding all of the rules that apply within a regulated industry is a challenge, especially when developing new products, moving into new markets or for new personnel. An IAA-funded project has developed an exploratory and decision-support tool to address this problem.

The system uses natural language processing to discover compliance-related regulations that might apply to a company or product, and displays these in a meaningful way. In developing the solution, the University of Surrey and partner Technotomy Ltd worked closely with Neural Insights, a global strategic management consultancy firm specialising in highly regulated industries, based in the Surrey Research Park.

Initially focusing on the financial services industry, the tool enables the automatic analysis of the Financial Conduct Authority (FCA), the Prudential Regulation Authority (PRA) and similar national and international data sources. It presents this information as a graphical map, categorising types of documents and showing links and dependencies. The algorithms for the natural language processing and the representation of semantic relationships used for the tool were developed under a previous EPSRC research project.

The core benefit of the system is to reduce the high costs that companies pay to identify and comply with financial regulations, while also removing the international barriers which make mapping to different national rules a difficult task. In addition regulations are constantly changing; so by assisting companies to stay up-to-date, the tool will help to maintain compliance, reinforce corporate social responsibility and counter financial crime.

A live version of the system is now being used to demonstrate and trial the concept, both internally by Neural Insights and externally with a major international banking organisation.