In April 2017, the UK’s Financial Conduct Authority (FCA) announced that it had introduced new digital features to a part of its regulatory Handbook. The announcement, ‘Introducing topic-based navigation’, may not look like a game changer for regulatory technology (RegTech), but if successful it could herald the first practical steps towards digitising financial services regulation and prompt a faster change in the skills mix of Compliance departments towards IT and data management skills.

Consider what the current situation: if you want to find out what legislation or regulatory guidance applies to a certain type of activity or firm in financial services (say a ‘bank’), conventional wisdom says that you either need an: intelligent search process or an intelligent searcher.

An intelligent search process?
Searching can mean using a specialised (generally subscription-based) service or database or simply doing a web search. Some of these services and databases have very complex search algorithms and language models to help match the terms of your query to the exact context of your search. Whilst these search processes may not be fully ‘intelligent’, they can help considerably in finding what you are looking for, whether within a closed system or database or on the Web.

Even then, it can still be difficult and time-consuming to locate the relevant regulatory provision that you need. For example, even if you know that the geography you are interested in is restricted to the UK and the activity relates only to the FCA’s regulation of banks, you will still have a lot of work to narrow down the relevant provision – as a search on the FCA Handbook website still returns 702 separate items for the term ‘bank’.

Or an intelligent searcher?
“The problem for a lot of computer-based searching,” says Mary O’Connor, WTW Global Head of Financial Institutions “is that financial services regulation has its own specific set of vocabulary which can reflect some very precise legal, accounting and regulatory concepts. And the vocabulary used for the same regulatory activity can vary a lot depending on what part of the world you are working in.” Mary added: “On top of the geographical variations, the actual terms used can be quite different to what an ordinary person might use to describe the same activity.”
For example, where an ordinary person may talk about a ‘bank’, regulations in various parts of the world could refer to a ‘deposit taker’, ‘credit union’, ‘building society’, ‘investment firm’, ‘savings & loan’, depositary’ or even ‘thrift’ – to name a few. But these concepts are not interchangeable and using different terms can lead to very different search outcomes. Indeed, in addition to the 702 items found when searching the FCA’s Handbook for the term ‘bank’, the Handbook provided 30 items for ‘deposit taker’, 212 for ‘credit union’, 190 for building society’, 956 for ‘investment firm’, zero for ‘savings & loan’ (but 154 for ‘savings’), 257 for ‘depositary’ and 1 for ‘thrift’ (but this item referred to the Office of Thrift Supervision, not a ‘thrift’ per se). So the correct terminology is vital before you start delving into the regulation.

But even if you know your terminology, it is unlikely to be enough without an in-depth of knowledge about the workings of the various regulations which cover those terms. Building up this knowledge of regulation takes time for people to do, which can be expensive for firms to develop in-house or to buy in from legal firms or compliance specialists. But not to have this regulatory expertise can be even more expensive for regulated firms – as incomplete information can lead to incorrect investment decisions, incorrect regulatory returns, possible regulatory fines or even commercial law suits.

The continued interconnectedness of financial regulation and its relentless pace of growth means that at some point we will hit the limit of what these networks of human ‘intelligent searchers’ can cover. A driver for change may be that the costs of the current approach to regulatory compliance become prohibitive, or the perceived risk coverage may be felt to be insufficient. Either way we will need something new, most likely non-human, to help us navigate the regulatory landscape going forwards.

A semantic layer: making regulation more navigable

To recap, one of the key problems with our current search processes is that they are not all ‘intelligent’ enough to understand and navigate the different technical meanings of our financial regulation.

A semantic layer is a business representation of corporate data that helps end users access data autonomously using common business terms.


One option to make regulatory information more easily navigable would be to create consistency in our terminology – use the same terms to refer to key issues, use the financial services equivalent of either ‘inches’ or ‘centimetres’. However, given the number of regulators, the legislative processes and the huge body of regulation involved this is unlikely to succeed in a reasonable period of time.

But there is another way. Instead of trying to change the wording in the regulation itself, we could create a global ‘semantic layer’ on top of existing financial services regulations to create such consistency. In this way, we can continue to use our different localised terms and yet still see a consistent view of regulatory information across a huge range of jurisdictions. The semantic layer will help us to navigate through the regulation.

But not to have this regulatory expertise can be even more expensive for regulated firms – as incomplete information can lead to incorrect investment decisions, incorrect regulatory returns, possible regulatory fines or even commercial law suits.

To illustrate the concept of a semantic layer and its importance, consider something basic like a find command (‘Control+F’) in a pdf or Word document where you search for a single word – say ‘orange’. The search function would highlight all the sentences that have the word ‘orange’ in them. Then you would have to review all the examples to find the specific sentence(s) you want.

What if you really wanted to get the regulatory provisions that contained all citrus fruits (i.e. the ‘topic’ or ‘class of fruit’ that included oranges, lemons, limes, grapefruit etc.)? But if you search for the term ‘citrus fruit’, you will only get those sentences with the actual words ‘citrus fruit’. It would not pick up those sentences with the words ‘orange’ or ‘lemon’ unless they also had the word ‘citrus fruit’ in them.
To get what you really want, you would need to know all the components of the class ‘citrus fruit’, do multiple searches with those individual search terms and then build up the regulatory picture from there.

**From ‘ctrl+F’ to topic-based navigation**

So, let’s consider what the FCA’s announcement about topic-based navigation could mean. In summary, the FCA has ‘tagged’ or marked all of the provisions in the Conduct of Business Sourcebook (COBS) section of the Handbook to create a range of topics (like ‘citrus fruit’ in the example above). In this way, the FCA has created a type of semantic layer that will allow anyone to search COBS by topic, not just by individual word. The FCA has also provided functionality in COBS to group-related provisions together in topic sets.

At first glance, the topic based navigation could simply look like a basic grouping functionality, but without the level of complex and predictive searchability that we are used to from commercial search engines such as Google – or even Twitter.

However, tagging the COBS content in the FCA Handbook and providing topic-based navigation is important as it could represent the first steps in creating a semantic layer for all the regulations in the FCA Handbook.

The FCA’s topic-based navigation could also provide the proof of concept that other regulators need to encourage them to take similar steps to start tagging their own regulations in this way. So taking a few more steps towards digitising all of financial services regulation.

**How many steps from topic-based navigation to digitising regulation?**

Creating a full semantic layer for the FCA Handbook would take a few more steps to achieve. It would involve converting the existing text from something that is somewhat open to interpretation into a less ambiguous (‘binary’) form that someone could code against.

Such a conversion could impact all of the 56,000 firms that the FCA regulates as the consistency provided by such a semantic layer could then provide the base from which the FCA Handbook could become properly machine readable, and so fully digitised.
The potential impact of digitising regulation

As the FCA reflected after its 'TechSprint' in November 2016 on unlocking regulatory reporting, digitising regulation could impact consumers, firms and regulators in several ways.

For example, regulation that has been converted into machine-readable text could:

- **Enable automated advice to Consumers** *(RoboAdvice)*
  It could reduce the cost of such advice and **reduce the number of people employed** in providing such advice and perhaps **change the skills mix** (to include more personnel with technology skills).

- **Support automated compliance advice to Firms**
  It could support **personalised filtering** to uncover which parts of the regulation would apply to a particular type of firm, so helping to reduce firms’ cost of compliance. It could also support **automatic alerts** when consultation documents presented an amendment to an existing regulation or a new regulation of relevant to key activities.

  It could also prompt a **change in the Compliance skills mix**, with a reduction on the number of staff undertaking administrative checking and even more emphasis on policy and legal interpretation as well IT and data management skills.

- **Facilitate a re-interpretation of how regulatory reporting could be undertaken by firms to regulators**
  Making the regulation fully machine readable would include the digitising the specification for the regulatory data that firms need to report to their regulators. Digitising such requirements could mean that firms may no longer need to ‘push’ the same data into various regulators in different formats on a monthly/quarterly/annual basis; nor would those regulators have to (re)store all that data all over again. Instead, as the data requirements would be unambiguous, regulators could ‘pull’ the agreed data instantaneously from firms on an as required basis using an agreed protocol.

  For firms, this streamlining of regulatory reporting could materially reduce their compliance costs. For regulators, the reduction in the duplicative storage of data could materially reduce their running costs.

  Clearly financial services regulation is not yet digitised, but by the FCA tagging part of its Handbook, it feels like we are one step closer.

  ‘The journey of a thousand miles begins with one step.’
  Lao Tzu