





# IMPROVING UPTAKE OF TEXT AND DATA MINING IN THE EU

## Facts

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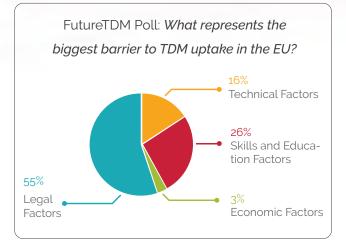
## Outcomes of the FutureTDM Project What have we learned?

Text and data mining – using algorithms to analyse content in ways that would be impossible for humans – is shaping up to be' a vital research tool of the 21st century. But Europe lags behind other parts of the world in adopting these new technologies.

The FutureTDM project has spent the last two years investigating what's holding Europe back. We've met with stakeholders and experts from all over Europe, gathering input and carrying out our own research to understand how Europe can take steps to support the uptake of TDM.

The potential benefits – and risks – are huge. Our economic analysis estimates that TDM technologies could have an impact of as much as USD 110 billion on the European economy by 2020. If we don't ensure that Europe is ready to foster and support the use of TDM, we risk seeing talent and economic benefits go elsewhere.

The economic impact of TDM in Europe could rise to as much as USD 110 billion by the year 2020.



### Uptake of TDM: What's stopping us?

What we found was that legal barriers are a big problem. TDM processes often involve copying content for analysis, so applications of TDM may fall foul of copyright laws. The USA has Fair Use provisions which protect transformative use of content, whereas the EU has a fragmented landscape of restrictive, often unclear laws that can restrict re-use of content for TDM.

Skills and education in this area also need a boost. Data analysis is fast becoming "the new IT", and people in all fields, from fashion to finance, could benefit from an education in fundamental data literacy and computational thinking skills.

Lack of infrastructure and economic incentives are lesser concerns – of course they are factors in the increased uptake of TDM, but based on our research they are not the primary roadblocks.

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## A TDM roadmap for Europe

Understanding the barriers to TDM in Europe was only one of FutureTDM's objectives. Our ultimate goal was to put together real, practical proposals to support the uptake of TDM in Europe.

To this end, we've published a roadmap for the EU based on everything we've learned about the existing barriers to uptake of TDM. It focusses on three key phases of support:

### Phase I: Content Availability

Before anyone can develop or apply TDM tools and technologies, they must have content to work with. This doesn't just mean the content is nominally 'available' on the internet somewhere. This means content must be legally and practically discoverable and re-usable for TDM.

This means clear, standard metadata for all kinds of content. This means making bulk access to content a practical reality. And, since rights clearance can be practically impossible for many TDM applications, it almost certainly means copyright reform to allow re-use of content that doesn't trade on the original creative expression.

### Phase II: Support Early Adopters

Many Europeans are already exploring uses and applications of TDM technologies. But the existing landscape is fragmented; knowledge is often shared only on an ad hoc basis across informal personal networks. This is where institutions like universities, research funders, and governments can play a crucial role in supporting knowledge sharing. We need initiatives that will connect TDM practitioners across domains and sectors, helping them share best practices and learn from each other's experiences.

## Phase III: The Next Generation

The key to building a society that can enjoy the full benefits of TDM technologies is education and awareness. We need to build a 'data-savvy' culture, where all Europeans have a fundamental awareness of the potential uses and benefits of data analytics. This will broaden the pool of future TDM practitioners and promoters, and have knock-on benefits across European societies.

## Where can I find more information?

**FutureTDM is here to help!** Our platform at futuretdm.eu brings together all the results of our project for you to explore – and it's aimed at making everything we've learned as useful and accessible as possible.

As well as databases of TDM projects, experts, methods and tools, our Knowledge Base includes a series of practical guidelines for stakeholders in the TDM landscape. These are resources offering straightforward, plainly-worded advice on legal, licensing, and data management issues – as well as on how universities in particular can play a key role in supporting the uptake of TDM in Europe.

