

## CASE STUDY: **Arago Technology**

### OVERVIEW

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There is a global need to increase electricity transmission capacity due to rising energy consumption and a changing energy mix.

Building additional transmission lines to cater for this demand is either not possible, or prohibitive through stringent planning constraints.

Arago Technology Ltd. has developed and patented a high strength insulator which can be applied to existing traditional transmission pylon designs enabling an increase in transmission capacity of existing line routes up to 150%.

Alternatively, new compact line routes can be constructed using the new Insulating cross-arm enabling significant tower height reductions.

Arago is a joint venture between EPL Composites Solutions Ltd (expert in composite design and manufacture) and the University of Manchester (expert in high voltage electrical power systems and materials) to commercialise the novel high strength insulator, currently exemplified as an Insulating cross-arm.

### OUR APPROACH

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#### **Client Meetings.**

The role of FIS360 was to deliver the entire process of commercialisation, taking the project from TRL1 through to an installed commercial product. As such we worked extremely closely with the inventor teams at EPL and UoM as well multiple engagements with the supply chain and end user community. The key to our success was managing expectation across the stakeholders and regular updates on progress / next steps.

#### **Assessment.**

Provided an independent report (written document, presentation etc.) which gave an appraisal of the technologies potential from a commercial, technical and financial perspective.

This confirmed high-level technical considerations, an indicative commercial value, the opportunity the technology offered and thoughts on the route to market.

Our report was based on desk research as well as engaging with our network of potential end users.

The recommendations on how to proceed were continuously tested over the life of the project to confirm they remained valid.

Based on the assessment phase outputs we led the development of the technical and commercial strategy. As with all aspects of the process we worked closely with inventor team and key stakeholders to gain their buy in and shape the project.

FIS360 delivered a commercial, technical and financial project strategy with timelines and milestone decision points.

This provided a clear understanding of competing technologies and organisations active in this area, prioritized options around funding sources matched to the commercialisation strategy, a proposed IP strategy, drafted content for marketing materials to attract partners (finance, technical, project) and identified the critical path to gain market entry.



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### OUR APPROACH

#### Project Implementation.

Our role was to manage the delivery / implantation of the technology, technically and commercially through to deployment on to the electricity transmission network. The role delivered the following achievements over a period of 4 years.

- Secured and managed over £2.8M of project funding (grant and equity)
- Managed a core team from UoM and EPL
- Build relationships internationally across the Utility business (National Grid, Scottish and Southern Energy, EirGrid)
- Delivered over 200 presentations and engaged with over 70 companies
- Managed the installation of 12 full-scale cross arms at various sites and development stages
- Supported the building of a 400kV test facility
- Manage the technology from a hand build to mass manufacture processes

- Product component manufacture in Austria, Germany and UK with assembly in the UK
- 40 months of continuous testing of the product at 400kV
- Developed business model and financial model
- Incorporated Arago Technology Limited and licensing IP into the company
- Built management team structure and recruited the executive chairman
- Managed a portfolio of Intellectual Property (patents and trademarks)
- Transitioned knowledge and leadership to the chairman and managing director

“This innovative technology has the potential to deliver a cost effective way of increasing the power carried on our transmission network.”

*David Gardner, Director of Transmission,  
Scottish Hydro Electric Transmission*

“This innovation should lead the way to the first major improvement in line configuration for decades and is world leading in concept.”

*National Grid ITI Report*

